# **Technical Report**

on the

Krone-Endora Alluvial
Diamond Project,
Limpopo Province,
South Africa

for

Diamcor Mining Inc.

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# 1. EXECUTIVE SUMMARY

#### 1.1 Introduction

Faan Grobbelaar & Associates (FGA) was retained by Diamcor Mining Inc. (the "Company" or "Diamcor") to update the 2009 independent National Instrument 43-101 compliant Technical Report for the Krone-Endora alluvial diamond project (the "Project"). The Project is situated directly adjacent to the north of De Beers Consolidated Mines Limited's ("De Beers") Venetia Diamond Mine, on the farms Krone 104MS and Endora 66MS (Figure 4-1) in the Limpopo Province within the Republic of South Africa.

The objective of this NI 43-101 Technical Report update is to independently review and provide comment on all historical information, available exploration data, and current trial mining information to provide an assessment of the resource potential estimated to exist on the properties, to provide an update on the extensive infrastructure development at the Project, and to provide comments and recommendations on future work programmes to be undertaken. The Project had been the subject of extensive exploration by De Beers over a period of several years, and the deposit has been identified as an alluvial fan-type body which is proposed to have sourced material from the higher grounds of the adjacent Venetia kimberlite cluster.

Late in 2007 as a result of their stated future vision it was decided that, as opposed to pursuing the Project further, De Beers would make it available for acquisition to other interested parties, and more specifically, to emerging and junior miners and explorers and women in mining. De Beers indicated its support of the South African Government's objective of building a successful and transformed diamond industry, and to further this objective requested comprehensive proposals from qualified parties to be assessed against various criteria to potentially acquire the Project.

Diamcor's subsidiary, DMI Minerals South Africa (Pty) Limited's ("DMI Minerals"), submission was ultimately chosen as the successful proposal to acquire the assets and, pursuant to the terms of an executed Sale of Assets Agreement between DMI Minerals and De Beers, DMI Minerals purchased the Krone-Endora Project from De Beers. At present DMI Minerals is in the process of completing the evaluation of the deposit and advancement of the Project, and plans to develop a full-scale mine in due course if feasible.

# 1.2 Property Description and Location

The Krone-Endora Alluvial Diamond Project is located on the farms Krone 104MS and Endora 66MS. The properties are located directly adjacent to the northern portion of De Beers' Venetia Mine (see Figure 4-1) which is proposed to have played an important part in the formation of an identified fantype alluvial/eluvial deposit which has been formed on the properties. The deposit is thought to cover a semi-circular area of roughly 5 square kilometres in size, and comprised of sediments of up to 15 meters in thickness proposed to have been formed by ephemeral streams and sheet-wash (erosion)

under semi-arid conditions from the higher grounds of the Venetia kimberlite cluster. The Venetia Mine is widely accepted as South Africa's largest producer of diamonds, with a high percentage of all diamond production classified as gem quality. These Venetia facts are considered significant given the deposit which occurs on the adjacent properties of Krone and Endora is proposed by De-Beers to have resulted from the erosion of what is estimated to be approximately 1 vertical km of material from the higher grounds of the Venetia kimberlite clusters onto the lower areas including those of Krone and Endora.

## 1.3 Surface and Minerals Rights

The surface rights and ownership of the properties are held by De Beers, and the properties reside within an area known as the Venetia Limpopo Nature Reserve (VLNR). DMI Minerals holds a Right of Access Agreement from De Beers granting access to and right of way over the VLNR lands for the life of the Project. DMI Minerals is the holder of a Mining Right (LP10011) which was granted over an area of 657.711ha (see Figure 4-2) covering the defined diamondiferous gravels. The Mining Right is valid for a period of 30 years and renewable for an additional 30 years. DMI Minerals has also applied for a Mining Right over the remainder of farms Krone 104MS and Endora 66MS, totalling 5,230.699 Ha (the original 5,888.410 Ha of the combined farms Krone and Endora, less the 657.711 Ha of the current Mining Right).

### 1.4 Geology and Mineralization

The independent review interpreted the Krone-Endora deposit as not only an alluvial fan-type body, but one that has undergone both alluvial (stream deposited) and eluvial (direct shift of source material) deposition. The review concluded there are two principal paleo-drainage systems, termed the K1 and K3 (after the Venetia Mine's kimberlite pipes of that name), which are the two areas which are believed to be the sources of the material transported by the associated paleo-drainages. These paleo-drainages sourced sediment from a raised plateau to the south where the diamondiferous Venetia kimberlites are located and where, as noted, it is estimated that approximately 1 vertical km of the material from the higher areas of the Venetia kimberlite pipes was displaced and eroded onto the lower grounds including those areas of Krone and Endora.

Two litho-stratigraphic units have been defined on Krone-Endora with diamond mineralization. The first of these is the coarser basal gravel unit (max thickness ~4 m), which directly overlies the bedrock. The second is a much thicker (up to 12 m) upper gravel unit which overlies the basal unit and consists of a mixture of discontinuous gravel lenses, grits and sands.

All geological models and results appropriately envision greater relative mineralization potential for the K1 paleo-drainage system (given its proposed source being the higher grade K1 kimberlite pipe), the basal unit (due to its better mobile trap-site development and flow energy), and the more proximal reaches of the deposit (due to its coarser sediment and therefore improved mobile trap-site potential).

# 1.5 Exploration, Drilling and Bulk Sampling

Although alluvial diamonds were discovered 35 km northeast of the area in 1903, it was not until 1969 that regional soil sampling led to the discovery of the Venetia kimberlites by De Beers. A number of different drilling programmes since the early 1980's were undertaken by De Beers in an attempt to delineate the current gravel deposits at Krone-Endora. Subsequently, there were three principal evaluation sampling programmes by De Beers, and an extensive drill programme by DMI Minerals (in 2011):

- 1. 1986 Large Diameter Drilling (LDD) Programme
  - 25 holes drilled
  - Data collected has been subsequently lost
- 2. 1995 Large Diameter Auger (LDA) Programme
  - 133 holes drilled
  - 200 m grid pattern, laid out at 45° to true north
  - Original 1986 LDD area was re-sampled
  - A few holes were clustered to test short range variability
  - Only 78 holes penetrated to bedrock, mostly outside the basal zones
- 3. 2004 Bulk Sampling Programme
  - 3 bulk sample pits were dug, 10 m x 30 m in size
  - 1 m thick "slices", from top to bottom, were sampled from each pit
  - Some noted sampling problems didn't reach bedrock in one pit, contaminated bottom slice with barren bedrock samples in another pit, etc., leading to a proposed under-valuation of grade estimates in the Basal unit
- 4. 2011 Drilling Programme
  - 489 RC holes drilled
  - 100m grid pattern, laid out on true north
  - Each hole logged in detail
  - Geological model generated by combining all historical information
- 5. 2011 Extended Drilling Programme
  - A further 69 RC holes were drilled to complete the final delineation of the deposit
  - The 2009 geological model was revised and the resource table updated
- 6. 2013 to present Trial Mining
  - 1 289 000 tonnes were excavated over both lithological units
  - 25 763.21 carats were recovered

 ~410,000 tonnes of Oversize material (+26) has been stockpiled, awaiting finalization of rotary scrubber / autonomous mill upgrades to be completed at the Treatment Plant

Given the significant amount of information available, and the nature of the deposit, no further exploration or drilling work was conducted as part of this evaluation and assessment of the Krone-Endora Project, and specific focus was placed on the development of infrastructure, a large-scale infield Dry-Screening Plant at the Project (given the significant percentage of fines material in the deposit), and a Treatment Plant to support the further advancement of the Project. The successful development of an efficient in-field Dry-Screening Plant was seen as a key element in the Project's further advancement, and potential future viability, given its ability to significantly reduce the size and thus overall capital requirements of the Treatment Plant, reduce overall operating costs, and lower the water requirements associated with the processing of materials through the removal of a high percentages of fine material under 1.0mm in size prior to processing.

# 1.6 Development and Operations

Infrastructure completed to support the further advancement of the Project to date includes:

- the construction of +/- 10km of primary access roads for the Project,
- the establishment and installation of +/- 4km of security fencing,
- the construction of the Treatment Plant site, offices, and lined water dams,
- the design, construction, and development of a deposit specific in-field Dry-Screening Plant,
- the design, construction, and development of a deposit specific Treatment Plant,
- the installation of three water pipelines totaling +/-14km of distance,
- the procurement and installation of a total of +/-13km of power lines,
- the procurement and installation of backup standby generator power,
- the purchase and deployment of various pieces of light duty, and heavy equipment, and,
- various other general infrastructure items typical of a medium sized mining operation.

#### 1.7 Diamond Resource and Grade Estimates

As part of the Assessment of the potential resource to be provided, the Author was given access to all relevant historical and current information and datasets. This information was used to independently re-model the data using Vesper® modelling software to calculate a potential gravel resource as part of the Assessment to be provided. As the results from the Vesper® model compared very well with the results obtained from the Datamine® modelling software using the 2011 drill programme data, (within 3%), the Author decided to stay with the Datamine® results. The results and findings of the 2011 Datamine® modelling were re-summarized and the total tonnes for each unit and zone are shown in the table below.

It should be noted that the grade data used in the modelling is from the original De Beers work, as any information gathered from the ongoing processing of material completed in conjunction with the development, testing, and commissioning of both the in-field Dry-Screening Plant, and the Treatment Plant done by DMI Minerals, does not lend itself to accurate grade estimations at this time. Current issues that preclude new grade estimations at this time include:

- Considerable focus was placed on the successful development of the Project's Dry-Screening Plant, with specific focus on the efficient screening of fines materials,
- As a result, volumes/tonnages from excavations to date have not been accurately measured to a level required for such estimates,
- Plant commissioning is not complete, and the finalization of the Treatment Plant and recovery process of diamonds is ongoing,
- The +26 mm oversize material was stockpiled during the development of the Project's Dry-Screening Plant. The Company is currently upgrading the Treatment Plant to allow for the processing of these materials above+26 mm size fractions,

Until such time as the above items are finalized, no new grade estimations can be calculated. DMI Minerals is working towards this.

PROPERTY AREAS	K1 Zone		K3 Zone	Confluence	Cambined	Confidence	
PROPERTY AREAS	Initial	Trial mined	Remaining	K3 Zone	Zone	Combined	Levels on Totals
		INFERRED F	RESOURCES				
Total surface area of Mining Right (Ha)			657.7	7111			High
Total surface of area investigated (m²)		1,710,000		1,998,000	1,690,000	5,398,000	High
Upper Gravels							
Total of surface covered with gravel (m²)	1,382,000	77,000	1,305,000	1,025,000	829,000	3,159,000	High
Average gravel thickness (m)		5.07		5.59	6.76		High
Total gravel volume (m³)	7,006,000	391,000	6,615,000	5,730,000	5,604,000	17,949,000	High
Average density (t/m³)		2.20		2.20	2.20	2.20	Medium
Total tonnes (Reported)	15,412,000	860,000	14,552,000	12,606,000	12,329,000	39,487,000	Medium
Basal Gravels							
Total of surface covered with gravel (m²)	713,000	62,000	651,000	1,347,000	672,000	2,670,000	High
Average gravel thickness (m)		3.46		3.55	2.04		High
Total gravel volume (m³)	2,467,000	213,000	2,254,000	4,782,000	1,371,000	8,407,000	High
Average density (t/m³)		2.20		2.20	2.20	2.20	Medium
Total tonnes (Reported)	5,427,000	469,000	4,958,000	10,520,000	3,016,000	18,494,000	Medium
Upper Gravels							
Estimated grade (cpht)		3.45		0.07	1.09		High
Estimated diamonds within zone (carats)	532,000	30,000	502,000	9,000	134,000	645,000	Medium
Diamond value (US\$/carat)		\$185.54		\$185.54	\$185.54	\$185.54	High
Basal Gravels							
Estimated grade (cpht)		12.74		0.13	1.20		High
Estimated diamonds within zone (carats)	692,000	60,000	632,000	14,000	36,000	742,000	Medium
Diamond value (US\$/carat)		\$185.54		\$185.54	\$185.54	\$185.54	High
Total							
Total tonnes		19,510,000		23,126,000	15,345,000	57,981,000	Medium
Total estimated diamonds (carats)		1,194,000		23,000	170,000	1,387,000	Medium

Numbers rounded to nearest 1,000. Numbers in grey, italicized font are not included in final Combined figures.

Table 1-1 Summary of Inferred Mineral Resource Estimate for Krone-Endora

#### 1.8 Diamond Valuation

Unlike posted prices of other mineral commodities, the varying diamond (and other gemstones) valuation must be emphasized due to the large range of value a "carat" might have – from dollars per carat to tens of thousands of dollars per carat. Proper assessment of a diamond resource must include accurate price per carat numbers.

Diamond valuation was done in this case by means of controlled sales through a reputable company, I Hennig & Co. Ltd. A total of 25,763.21 carats of rough diamonds, representing all rough diamonds incidentally recovered to that point as part of the ongoing development, testing, and commissioning exercises, were tendered and sold for USD \$5,865,048.33, resulting in a value of USD \$227.65 per carat for all diamonds sold. Two extraordinary diamonds recovered of 91.72 carats and 43.90 carats however, contributed USD \$1,135,844.10 to the total. Removing these two stones from the calculation was deemed to be more conservative, resulting in an average valuation of USD \$185.54 per carat.

#### 1.9 Conclusions

After a review of all available geological information, the site visit, and the independent re-modelling of the available datasets from the previous drilling programmes, it is apparent that the Krone-Endora Project has the potential to be developed into a profitable medium-sized diamond producer. In addition to this statement, it should be noted that alluvial diamond deposit mineralization is typically not uniform, whereas the deposit at Krone-Endora is relatively uniform due to the deposit's location directly adjacent to the identified source, and usually very dependent on trap sites. In typical alluvial deposits, large areas can be barren while the individual trap sites can be very rich, which is why such alluvial operations are normally high risk investments. The fact that diamonds were found in the boreholes drilled (notwithstanding the fact it was large diameter drilling), indicates the high potential of the area and deposit in question. These results also support the conclusion that the deposit is not an "alluvial" deposit only, but rather a combination of an alluvial and "eluvial" deposition. The latter "eluvial" term indicating a "direct shift" of the source material from the higher grounds of the adjacent Venetia kimberlite pipes, and this is thought to be the case, especially in regard to the Upper gravels.

In selecting a "random" site during bulk sampling, it is reasonable to assume the chances of picking a richer or poorer area are unlikely, and taking this into consideration, together with the noted errors made during the past bulk sampling, it is possible that the deposit is much richer than what is anticipated from the current dataset of this project.

The problems/errors identified by the Author which could affect the Project are:

- 1. The variability of the geology
- 2. Most of the holes drilled in 1995 did not penetrate to the bedrock (Millad, 2005)
- 3. The 1995 samples were not all fully analysed, (Millad, 2005)

- 4. During the bulk sampling in 2004 the full width of the Pit 1 area was not processed. (Millad, 2005)
- 5. Bedrock contamination in Pit 2 led to under evaluation (Millad, 2005)
- 6. Basal gravel in Pit 3 was not removed
- 7. The results of the upper gravel suite from the bulk sampling were not considered during the evaluation was done by Millad in 2005
- 8. With the current trial mining exercise mainly 'free' diamonds within the upper and lower gravel suites were recovered as part of the ongoing development of the in-field Dry-Screening Plant. The harder calcretized gravels typical of the stockpiled material in the +26.0mm size fractions have not been processed as yet.

To evaluate all horizons for possible diamond content during the current trial mining process, the overburden, which consist of alluvium and weathered kimberlite, was processed as well.

The independent Assessment provided for the Project as a result of independent modelling of current information consist of a conservative potential estimate of 58 million tonnes of diamond-bearing gravel, with a preliminary estimate of 1.327 million carats of diamonds.

#### 1.10 Recommendations

It is recommended that the current 'Trial' mining exercise be done under a more controlled environment where information gained can be maximized. This would require the finalization of the upgrades to the in-field Dry-Screening and Treatment Plants to allow for the optimization of liberation of diamonds within the two diamondiferous horizons and grade control measures to determine paleo depositional patterns.

# 2. INTRODUCTION

This Technical Report of the Krone-Endora Alluvial Diamond Project comprises background information, drill and sample data, including results from the trial mining and rough diamond recoveries which were incidental to the ongoing development, testing, and commissioning exercises completed on both plants at the Project up to 02 February 2015. It is prepared in order to document the results of exploration and trial-mining work and the development of infrastructure on the Krone-Endora property and to act as an update to the 2009 Technical Report of the same name.

This Technical Report was prepared by J.F. (Faan) Grobbelaar (acting as an Independent Qualified Person) and James P. Hawkins (an employee of Diamcor Mining, and therefore a non-Independent Qualified Person) at the request of the directors of Diamcor Mining Inc. (Diamcor). Mr. Grobbelaar Authored Sections 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 20, 23, 25, 26 and 27, while Mr. Hawkins Authored the Sections 2, 18, 19, and 24. Sections 15 to 22 are not relevant to this Technical Report as they are additional requirements for Advanced Properties, although information deemed to be of interest was included in Sections 18, 19, and 20.

This Technical Report of the Krone-Endora Alluvial Diamond Project is based on information gathered from on-site visits, technical reports by Government agencies, the extensive De Beers' internal reports and data, the extensive reverse-circulating (RC) drill programme the Company conducted, the results from the ongoing Trial Mining (rough diamond recoveries incidental to the commissioning of the Processing Plant), and other relevant published and unpublished data. The conclusions expressed in this report are therefore only valid for the date of this report and may change with time in response to variations in economic, market, legal or political factors, in addition to on-going exploration results. A listing of the principal sources of information is as follows:

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The Krone-Endora Alluvial Diamond Project is owned by Diamcor's 70% owned subsidiary, DMI Minerals South Africa (Pty) Limited (DMI Minerals), which is 30% owned by the wholly-owned subsidiary of Diamcor's Black Economic Empowerment partner, Nozala Investments (Pty) Limited (Nozala). Figure 2.1 outlines the partnership.

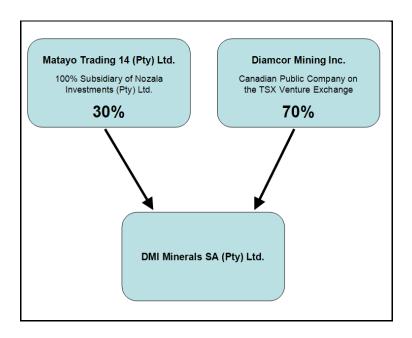


Figure 2-1 Ownership Structure of DMI Minerals SA (Pty)

Mr. Grobbelaar, the principle Author, visited the site January 15<sup>th</sup> and 16<sup>th</sup>, 2009, July 4<sup>th</sup>, 2011, and December 12<sup>th</sup> and 13<sup>th</sup>, 2014. Mr. Hawkins visited the site from June 1<sup>st</sup> to July 8<sup>th</sup>, 2011, and from February 22<sup>nd</sup> to April 2<sup>nd</sup>, 2012.

# 3. RELIANCE ON OTHER EXPERTS

#### 3.1 Mineral Resource Data

This report relies in part on various De Beers reports and data compiled over a period of several years which was used in producing the Internal Mineral Deposit Estimate Report compiled for De Beers Africa Exploration by De Beers Mineral Resource Management – Placers (Millad, 2005). Given De Beers' long-standing position as the world's largest diamond mining company and their considerable knowledge and access to the financial and technical resources needed to properly develop such reports, there is no reason to assume that any of the extensive information available for the report, was not reasonably accurate or prepared in a suitably professional manner using generally accepted geological principles. Further, given that the data was part of an ongoing internal property evaluation, it can also be reasonably assumed to be conservative, as opposed to promotional, in its results and conclusions.

These reports have been relied upon by the Author in the sections relating to Mineral Resource estimates.

#### 3.2 Carat Valuation

Valuation of all rough diamonds recovered during the development, testing, and commissioning of the Krone-Endora Treatment Plant to date was done by the industry-standard practice of putting representative diamond parcels up for tender/sale. Diamond Realisations (South Africa), a subsidiary of I. Henning and Co. Ltd., have run independent diamond tenders and sales on behalf of DMI Minerals since June 2013, where 25,763.21 carats were sold for USD \$5,865,048.33 – for an average of USD \$227.65/ct.

The above carat valuation numbers, however, include two extraordinary stones recovered to date, namely; a 91.72 carat diamond that sold for USD \$817,920.00 and a 43.9 carat diamond that sold for USD \$317,924.10. Rather than skew the average price per carat, it was decided to remove these two stones from the calculation, resulting in 25,627.59 carats selling for USD \$4,729,204.23, for an average carat valuation of USD \$185.54/ct.

Values obtained for diamonds through these means represent actual sales completed in the competitive market by registered, practicing, international diamond buyers. The values thus obtained are actual, realized sale prices, and not simply a valuation with no obligation to purchase. In addition, the total number of carats sold is in the order of three times the size of what is typically sought after for a representative sample for valuation purposes, so the resulting carat valuation can be considered as very credible.

is therefore concluded that there are no significant risks associated with the diamond valuation sed in this technical report. These sales values have been relied upon by the Author in the sections elating to Mineral Resource estimates.

# 4. PROPERTY DESCRIPTION AND LOCATION

#### 4.1 Area and Location

The Krone-Endora Alluvial Diamond Project is located on the Farms Krone 104MS and Endora 66MS which are 5,888 hectares in extent, and located directly adjacent to the De Beers owned Venetia Diamond Mine in the Limpopo Province of South Africa. The Project is located approximately 500km north-northeast of Johannesburg, and the nearest large town is Musina which is approximately 107 km to the east (see Figure 4-1).

The actual mining area as defined by the Mining Right is 657.7111 hectares, located in the south-central portion of the larger project area (see Figure 4-2).

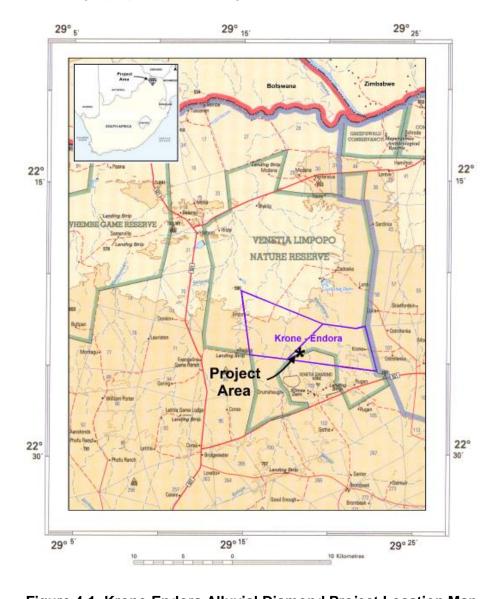


Figure 4-1 Krone-Endora Alluvial Diamond Project Location Map

# 4.2 Surface and Mineral Rights Details

The farms Krone 104MS and Endora 66MS are owned by De Beers and form part of the Venetia Limpopo Nature Reserve (VLNR). Access to the properties when Diamcor finalized the acquisition in February of 2011 was provided for by way of a Rights of Access Agreement as part of the Sale of Assets Agreement executed between the Parties. The Right of Access Agreement from De Beers grants DMI Minerals access to and right of way over the VLNR lands for the life of the Project.

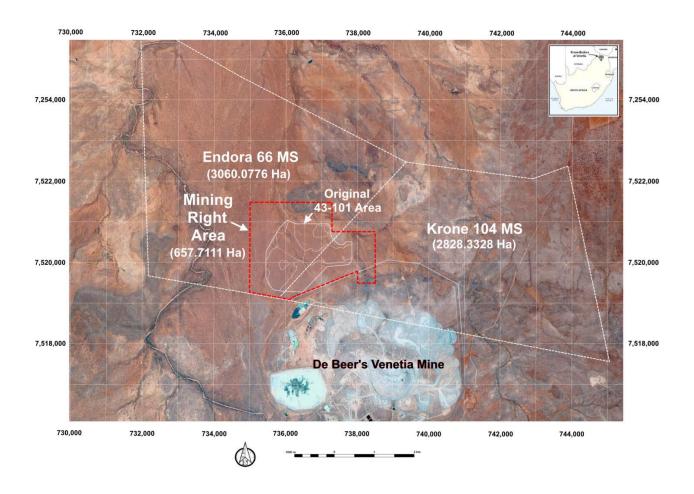


Figure 4-2 Mining Right Area in Relation to Farm Boundaries

In September of 2014 DMI Minerals received a thirty year Mining Right (LP 30/5/2/2/1/10011 MR), over the area of the Krone-Endora Project with the best defined resources, totalling 657.7111 hectares (see Figure 4-3). The Mining Right "grants to the Holder the sole and exclusive right to mine, and recover the mineral/s in, on and under the mining area", and is renewable at the end of the thirty-year period for an additional 30 years. An additional Mining Right application was submitted by DMI Minerals shortly after the first application in April 2012 to cover all of the remaining areas on the farms Krone 104 MS and Endora 66 MS, since the original Prospecting Permits were not renewable.

As of the effective date of this Technical Report, that second Mining Right application is still being reviewed by the DMR.

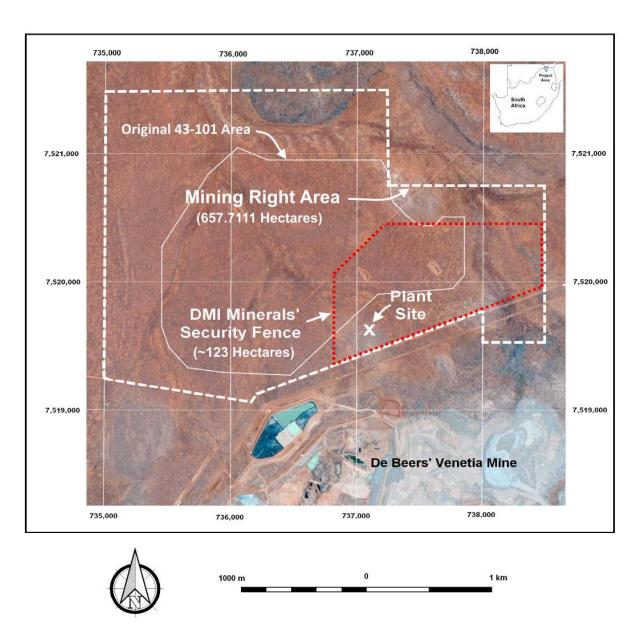


Figure 4-3 Current Mining Right Area

# 4.3 Surveying Details

The co-ordinates of the Krone - Endora Mining Right area as independently surveyed and later recorded by the Department of Mineral Resources of the Government of South Africa are outlined in Table 4-1 below.

UTM Coordinates					
Corner	Northing	Easting			
1	7520750	738600			
2	7519500	738600			
3	7519500	738100			
4	7519775	738000			
5	7519125	736200			
6	7519060	736150			
7	7519240	735000			
8	7521500	735000			
9	7521500	737250			
10	7520750	737250			

Table 4-1 Co-ordinates of the Krone - Endora Mining Right

### 4.4 Royalties, Rights and Payments

There are no royalties, back-in rights, payments or other agreements and encumbrances to which the property is subject.

#### 4.5 Environmental Liabilities

The environmental liabilities for the prospecting activities were detailed in the Environmental Management Programmes (EMPs). The EMPs originally submitted by De Beers dated March 27, 2008 made provision for ZAR 585,000 (approximately CDN \$62,000) in rehabilitation guarantees.

The property is part of the 36,000 hectare De Beers-owned Venetia Limpopo Nature Reserve. Due consideration for the wildlife and environment will be required, however no additional development requirements are anticipated other than the typical well-regulated Mining Work Programmes (MWP), Prospecting Work Programmes (PWP) and EMP's required by the Department of Mineral Resources for any such project.

As part of the Sale of Assets Agreement with De Beers, DMI Minerals was required to assume the ZAR 585,000 Rehabilitation Liability associated with the Prospecting Rights. In conjunction with the renewal and transfer of the associated prospecting permits, new PWP's and their corresponding EMP's were submitted to more accurately reflect the expanded prospecting activities that DMI Minerals intended to conduct. The rehabilitation liability remained the same and DMI Minerals provided the DMR with guarantees in the amount of ZAR 585,000 to replace those held on behalf of De Beers.

The current environmental liabilities associated with the Mining Right are documented in a standard Environmental Management Programme (EMP), which was derived from an Environmental Impact Assessment (EIA) of the area, approved by the Director, Mineral Development, Limpopo Region,

Department of Mineral Resources, South Africa. The work to be carried out as per the Company's Mining Work Programme, and the associated financial commitments necessary to satisfy the rehabilitation liabilities were calculated to be an amount of ZAR 2,383,510 (approximately CDN \$254,000). A guarantee in this amount was provided by DMI Minerals to the DMR at the time that the Mining Right was granted. Any additional rehabilitation liability deposit requirements was assessed based on the proposed future work programmes.

# 4.6 Additional Work Permits Required

No additional permits beyond the Mining Right issued are required to conduct the work proposed for the Project. A new Water Use Licence has been applied for from the South Africa Department of Water and Sanitation which, if granted, the Company feels should be sufficient to support their processing targets.

# 4.7 Any Other Significant Risk Factors

No other significant risk factors have been identified.

# 5. <u>ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE</u> AND PHYSIOGRAPHY

## 5.1 Topography, Elevation and Vegetation

The Project area is almost completely flat with higher lying areas situated on the northern boundary. The flat areas have their origin due to the deposition of sediments by fluvial processes. The higher areas, mostly hills and smaller kopjes, are bedrock outcrops that form low ridges consisting mainly of gneisses left behind after continental glaciation processes. These higher areas are also a controlling factor in the sedimentation by paleo and present streams. The average elevation is in the range of 630 m to 640 m above mean sea level.

The Project area is situated in a moderately closed shrub land with the dominant tree/shrub being *Colophospernum mopane* (mopane), with other species of woody plants and grass species also identified. Although the Project area is situated in the privately owned Venetia Limpopo Nature Reserve, no endangered or protected plant species were recorded during the site visit. The region indeed falls within the least threatened category that is assigned to veld types.

# 5.2 Property Access

The Krone-Endora Alluvial Diamond Project is located in the Limpopo Province of South Africa at coordinates 22° 24′ 30″ S latitude and 29° 18′ 00″ E longitude. The nearest centres to the Project are Alldays, 33 km south, and Musina, 107 km east. Commercial airlines offer several daily non-stop flights from Johannesburg to the provincial capital, Polokwane (population ~130,000), approximately 200 km south of the Project area on National Route 521.

All three centres can be reached via good surfaced tar roads. Local airstrips exist at both Musina and Alldays, as well as a private airstrip at the Venetia mine. Access to the property is off of National Route 521 by local gravel roads that have been upgraded by the Company.

#### 5.3 Proximity to Population Centres

As stated above, the nearest centres to the Krone-Endora at Venetia Diamond Project are Alldays (population ~2,000), 33 km south, and Musina, (population ~30,000), 107 km east. Commercial airlines service are available to the provincial capital, Polokwane (population ~130,000), approximately 200 km south.

#### 5.4 Climate

The Krone and Endora properties are situated in an area that forms part of the low plateau (or low-veld) of South Africa and is covered by typical low-veld woody thickets with scattered grass. The area receives about 350 mm of rain annually, which falls mostly during summer. The winter months

are almost completely dry, with temperatures ranging from 20°C during the day in winter, to summer daytime temperatures reaching 35°C - 40°C. As such, the climate has little or no impact on the operations of a mining venture.

#### 5.5 Local Resources and Infrastructure

# 5.5.1 Sufficiency of Surface Rights for Mining Operations

The Mining Right issued to the Company by the DMR, and the Rights of Access Agreement between the Company and the landowner (De Beers) give the Company the right to conduct mining operations on the property.

# 5.5.2 Availability and Sources of Power, Water, and Mining Personnel

As with any mining venture, power and water are an integral part of the operation. In August 2013, Eskom, the State power utility, completed an 8.4 km, 1,000 kVa main power supply line to the Project area that replaced the diesel generators installed by the Company, which now act in a back-up capacity for the Project. The Company has also installed an additional 0.7 km power line to support the in-field Dry-Screening Plant, and an additional 3.1 km of power lines to support two of the Company's water boreholes.

The Project resides in a semi-arid area whereby there is a general shortage of water and thus, due consideration was given to locating suitable sources. In 2012 the Company was granted a Water Use Licence (WUL) from the Department of Water Affairs (now the Department of Water and Sanitation) and approximately 14 km of water pipelines were installed from three suitable water boreholes as well as all other necessary infrastructure. This provided the Company a sufficient amount of water to conduct the prospecting work, initial plant commissioning, and trial mining exercises.

Prior to the WUL expiring, the Company applied for a new WUL with a larger volume sufficient to support full scale mining operations. In addition to the existing boreholes already in use, the addition of three new boreholes located along the Project's main water supply pipeline route is planned by the Company. Management has been actively engaged with the Department of Water and Sanitation, and believes that the new WUL will be granted in due course. The minimization of water usage and proper water management and water recovery methods to reduce the overall ongoing requirements have been implemented and continue to be refined.

Musina, 107 km to the east, is a modern town of over 30,000 inhabitants which has comprehensive mining support services, personnel and supplies as well as access to mining-related spares. The current Project personnel requirement is in the range of 40 to 60 people, which is easily filled. The Project's location directly adjacent to De Beers Venetia diamond mine also provides various benefits with regards to suppliers, equipment maintenance, and various other services associated with the ongoing operations of any mine.

# 5.5.3 Potential Tailings Storage, Waste Disposal and Processing Plant sites

With the move to Trial Mining studies being determined by the Company to be the best method to advance the Project, a decision was made to develop both an in-field Dry-Screening Plant, and a separate Treatment Plant, and in doing so, develop ones which would be of sufficient size for the Project if a move to full production was warranted. This decision was based on the relatively low-cost of a treatment plant for alluvial diamonds, the requirement to establish infrastructure in all cases anyways, and the need to properly evaluate diamond recoveries in volumes which only a complete plant could do.

The in-field Dry-Screening and Treatment Plant sites (see Figure 5.1, below) were chosen with several criteria in mind, namely:

- Bedrock outcrop or minimal overburden (so as to not cover diamond-bearing gravels)
- 2. Proximity to higher-grade K1 gravels
- 3. Proximity to infrastructure such as roads, power lines, and water pipes
- 4. Optimal location for long-term exploitation of deposit, if a mining decision is reached

The various dams are identified on the Google earth image site (see Figure 5.1, below). Material that has been processed is back hauled to the Excavation Pit for immediate rehabilitation, eliminating waste disposal sites.



Figure 5.1 Trial Mining Area with Dams Identified

Google Earth Image, September 2013

# 6. HISTORY

In 1903 diamond bearing gravels were discovered on the farm Seta, 35 km northeast of the present Venetia Mine, but it was not until 1969 that De Beers undertook a regional soil-sampling programme that eventually led to the discovery of the Venetia kimberlites in 1980.

A number of different drilling programmes in the early 1980's were undertaken by De Beers in an attempt to identify and delineate the current gravel deposits at Krone-Endora. There was little in the way of summary information available for these earlier exploration programmes.

There were three principal evaluation sampling programmes previously completed, starting with a limited Large Diameter Drilling (LDD) programme in 1986 when twenty-five 500mm and 600mm LDD holes were drilled. (Hennweg, 2003). Unfortunately most of this information could not be verified later and the data was thus excluded during later and the final evaluation of the Project.

This was followed in 1995 with a more comprehensive Large Diameter Auger (LDA) programme. One-hundred and thirty-three holes were drilled using a Williams 1.20 m diameter flight auger on a pre-determined grid. Samples were collected in 1 m lifts for analysis (Loubster, 1996). Unfortunately the auger proved to be incapable of penetrating to the bedrock surface when it encountered the highly resistant basal gravels. As a result only 78 of the 133 holes penetrated to bedrock, mostly where the basal gravels were not present. The area that was covered in 1986 was included in this programme for re-evaluation.

During the processing of the samples, the material was ultimately screened to a -12 / +1mm fraction, which was then processed. During the sample preparation phase before processing the idea was left in the Author's mind that not all of a particular sample was processed totally. This could lead to an under-estimation of the grade of the gravel horizons.

The 1995 exploration programme delineated and evaluated the upper body to a large extent, but did not address the basal gravel estimations to the same degree.

In 2004 De Beers undertook a bulk sampling exercise and three sample pits were excavated. Pit 1 was positioned in the area co-indicated with the higher grade samples from the 1995 LDA programme. Pit 2 was placed in the central reaches of the K1 drainage, while Pit 3 was located in the confluence area. Each pit was sampled in 1 m slices over the 10 m x 30 m area of each pit and transported separately to sample stockpiles. In Pit 1 the basal gravel could not be removed to bedrock due to the resistance of the material. In Pit 3 the basal gravels were not removed for the same reason. In Pit 2 bedrock material was removed with the bottom sample, diluting the gravel material, which would invariably result in a lower grade analysis. The results from the bulk samples of the upper gravel horizon were not taken into consideration when the final evaluation was done as it was not available at the time.

As is the case in 1995, the bottom gravels were not fully accessed. When considering the results from the whole exploration programme from 1986 to 2004, the volumes of the lower gravel horizon and the grades of both horizons as quoted by De Beers were considered by the Author as conservative.

The data and sampling from these programmes were used by De Beers in order to produce, what should be correctly referred to for the purposes of this report, an Internal Mineral Deposit Estimate Report (Millad, 2005) for their internal use. While being completed to a level of professionalism consistent with what one would expect from an entity of their stature, the report was not designed, nor intended to be used, for the purposes of a NI 43-101 compliant report.

Other than the 2004 bulk sampling programme, there was no historic production. There were no prior owners of the property before De Beers.

# 7. GEOLOGICAL SETTING AND MINERALIZATION

# **7.1 Regional and Local Geology** (From Barton et al. 2003)

The cratonic core of southern Africa has been partially or wholly covered by largely undeformed or undisturbed Neo-Archaean, Eo-Proterozoic and Paleozoic sediments and lavas of the Transvaal and Karoo Supergroups. The underlying Archaean cratonic rocks comprise classic granite-greenstone terrain as well as the Meso- and Neo- Archaean Witwatersrand and Ventersdorp sediments and lavas.

Subsequent to the last outpouring of basaltic Stormberg lavas in the Jurassic and the initiation of the break-up of Gondwanaland, a major period of erosive reshaping of the land has continued through the Cretaceous and Tertiary Periods to the present day.

The area surrounding the ~530 to ~519 Ma (million years ago) Venetia kimberlite pipes in the Central Zone of the Limpopo Belt, South Africa, consists of four tectonic units intruded by Proterozoic dolerite dykes and sills. The structurally lowest Krone metamorphic terrane (Archean?) is composed primarily of quartzo feldspathic gneisses, gently folded along approximately north-south trending axes. Zones of mylonite separate the Krone metamorphic terrane from the Venetia and Endora klippen. The Venetia klippe, which includes a synclinal remnant of a nappe, is composed of four mappable units. The lowest consists of interlayered 3.2 Ga (billion years ago) quartzofeldspathic gneisses and ~3.1 Gaorthoamphibolite. The next highest unit consists of thin, discontinuous layers of quartzo feldspathic gneisses, ortho- and para-amphibolite, carbonate and calc-silicate rocks, magnetitequartzite and quartzite. Over lying this is a metasedimentary unit composed primarily of quartzite and carbonate and calc-silicate rocks. U-Pb ages for detrital zircons from within the quartzite indicate that this unit is younger than ~2.67 Ga. The upper most unit consists of granitic orthogneisses derived from a ~2.45 Ga precursor. Most of the contacts within and between these units in the Venetia klippe have been tectonically deformed into mylonite or biotite-schist although some sedimentary contacts may be preserved. The klippe is a doubly folded synform with a strong east-west trending, ~2.04 Ga D1 fold axis locally refolded long ~2.03 Ga north-south trending fold axes. Sedimentary structures preserved in the meta-sedimentary unit indicate that the synform is a syncline. The Endora klippe comprises a synform of quartzite and magnetite-quartzite of uncertain age. Intruding the Krone metamorphic terrane and probably the Venetia klippe is the Gotha granitic complex consisting of granite, granodiorite and tonalite of possible ~1.9 to ~2.0 Ga age. Igneous rocks composing this terrane are characterized by large U and Th contents. The emplacement of the Venetia kimberlite pipes into this area was largely controlled by faults related to the Dowe-Tokwe system.

A map of the local geology can be found in Figure 7-1, below.

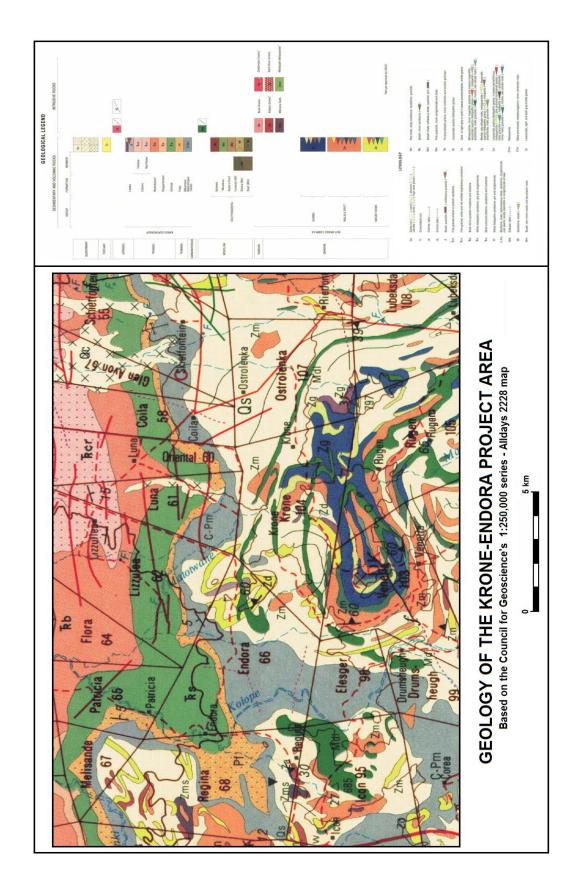


Figure 7-1 Local Geology of the Krone-Endora Area

# 7.2 Property Geology

The Krone-Endora deposit is interpreted as an alluvial fan-type body, which is currently still active, with deposition having commenced sometime during the early Cenozoic (up to 65 million years ago). Two principal paleo-drainage systems, termed the K1 and K3 (after the Venetia kimberlite pipes of the same name) paleo-drainages, have sourced sediment from a raised plateau to the south, and the diamonds are believed to have been derived from the diamondiferous Venetia kimberlites which are situated on this higher ground. Two litho-stratigraphic units have been defined at Krone-Endora. The first of these is the basal unit (max thickness ~4 m), which consists of coarse gravels characterized by an abundance of dolerite clasts. The basal unit directly overlies the basement sequence, which comprises rocks of the Lower Karoo Supergroup and the Limpopo Mobile Belt. The much thicker (up to 12 m) upper unit overlies the basal unit, and consists of a mixture of discontinuous gravel lenses, grits and sands. The geological model predicts greater relative mineralization potential for the K1 paleo-drainage system (due to higher grade K1 source), the basal unit (due to better mobile trap site development and flow energy than upper unit) and the more proximal reaches of the deposit (due to coarser sediment and therefore improved mobile trap site potential).

A satellite photo (see Figure 7.2) with the areal extents of the upper and basal gravel units, as defined by the 2011 reverse circulation drill programme conducted by the Company, is shown below.

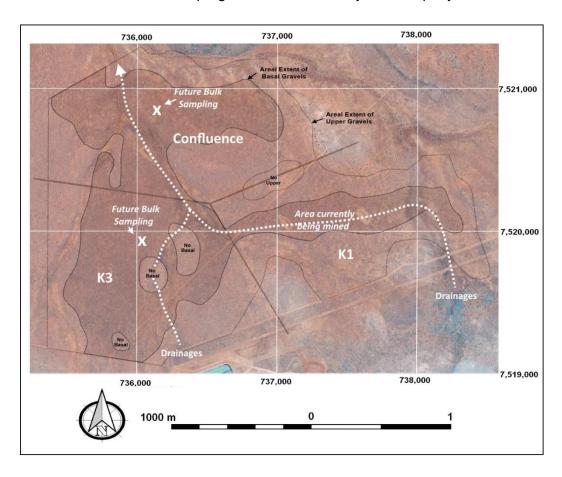


Figure 7-2 Outline of Upper and Basal Gravel Units

#### 7.3 Mineralization

The geology of the deposit as seen in the three bulk sampling pits indicates different events of erosion and deposition that occurred over periods. The first event was the deposition of the basal gravels and the second and subsequent events at a much later stage, although continuous erosion is evident between events (see Figure 7-3).

Both the K1 and K3 paleo drainages carved gorges through the resistant dolerite directly south and southeast from the Project area, forming gorges through which the depositional material was transported into a lower carved paleo channel system. Once exiting the gorge, stream velocity dropped and sedimentation of the basal gravel took place in the form of longitudinal gravel bars with the coarser material most likely closer to the mouth of the gorge and fining downstream. The events of the upper unit were much later and under more sedate conditions, hence the wider distribution of the upper gravels.

The gravel beds found in the Project area indicate two stratigraphic units, a lower basal unit, which seems to be a once-off event, and the upper unit that comprises several events of alternating gravel and soil/grit/sand deposition.

The basal gravel horizon directly overlies the bedrock formation, which consists of Karoo rocks and/or formations of the much older Limpopo Mobile Belt. The basal gravels indicate the first phase of deposition in higher erosional conditions where boulders of ~500mm were transported and deposited near the mouth of the gorge. Most of these boulders are of dolerite origin and its angular/sub-angular appearance indicates short distances of transportation, (most probably originated from the dolerite gorge). The calcretization of this horizon indicates a period where arid or semi-arid conditions prevailed.

The upper unit represents a more typical alluvial fan-type deposit covering most of the paleo K1 and K3 systems. The variegated unit represents various periods of somewhat higher and lower erosional periods. The gravels within this unit are in the form of non-extensive gravel lenses, with a similar distal fining of the material away from the source. The lenses are thinner than the basal unit and the cobbles/pebbles much smaller. Very little to no calcrete cementing is to be found.

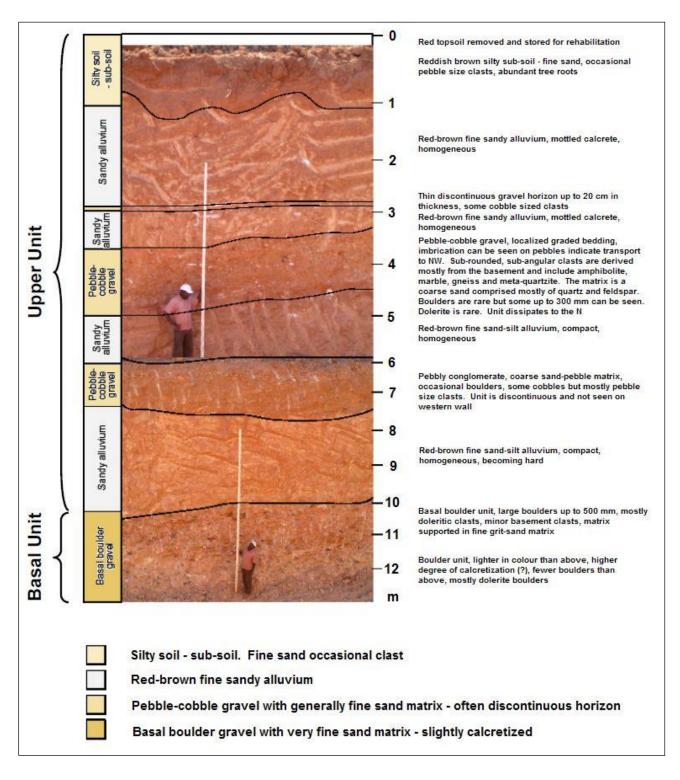


Figure 7-3 The Stratigraphy of the Krone-Endora Deposit, as visible in the northeast wall of Pit 1 of the 2004 sampling programme (after Spooner, 2004 and Millad, 2005)

# 8. DEPOSIT TYPES

The Project area is located within the interior of South Africa, on the Limpopo Mobile Belt between the Kaapvaal Craton and the Rhodesian Craton, and proximal to primary sources of diamonds in the Venetia Kimberlite pipes.

The landscape of the Southern African interior has been dominated by erosion since at least the late Mesozoic (66 Ma) (Helgren, 1979). It is estimated that approximately 1,000 vertical metres of the Kimberlites have been eroded from the Venetia cluster (Figure 8-1).

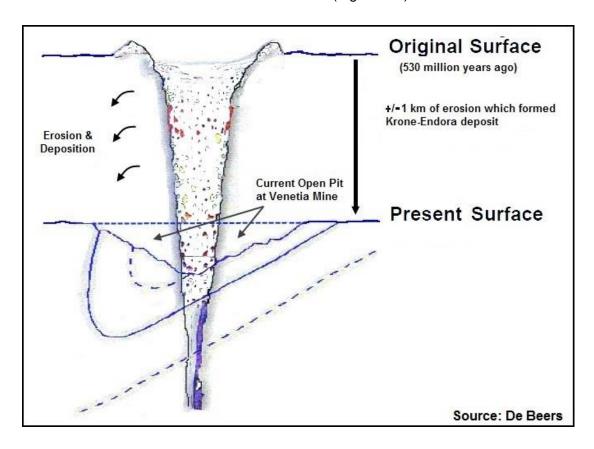


Figure 8-1 Proposed Erosion of the Venetia K1 Kimberlite Pipe

#### 8.1 Alluvial Diamonds

During the alluvial transport process in rivers, natural attrition removes most of the poor quality and flawed diamonds while the better quality stones are preserved. At the same time the diamonds are also sorted according to size with most of the larger stones being preserved in the upper reaches of the paleo-drainages while the small stones travel further. The result of this sorting process typically causes large differences in run-of-mine production value of diamonds of alluvial deposits which occur, either closer or further away, from their originating sources.

During arid periods in the more recent history, fluctuating ground water levels have precipitated calcium carbonate in the spaces between sand grains and between the pebbles and boulders of the gravel deposits to form calcrete. This has cemented the gravels and in places completely replaced less-siliceous clasts. Locally the calcrete may be dense and continuous and form an extremely resistant "hardpan" calcrete capping above or within the gravel.

### 8.2 Gravel Types

There are two main types of gravels that can be found along the diamondiferous rivers of South Africa, namely Surficial gravels and Primary gravels.

Surficial gravels typically consist of a deflationary lag ("rooikoppie") left from the erosion, winnowing and removal of light components, and enrichment of heavy components (including diamonds) of a calcretized gravel deposit. Their characteristic red colour is derived from windblown sand that acts as a secondary matrix. The gravels often have clasts with a high iron or manganese content. These clasts, together with diamond, quartz and chert are the most resistant to weathering and tend to concentrate at the surface of older gravel horizons.

The Primary gravels can be divided into Suspended gravel, classified as a cobble to boulder size gravel separated from the bedrock or basal gravel unit by a sand lens greater than 1 m thick, and a Basal gravel, situated on the bedrock contact. These gravels consist of cobble to boulder to pebble size material set in a sandy matrix. The gravels were normally deposited as longitudinal gravels bars in channels and as point bars in a braided, slightly meandering river system. The gravels associated with channel features are often well sorted and shows upward fining sequences. Outside the main flow of the river the gravels are poorly sorted. Point bar deposits consist of inter-fingering coarse gravel bars and sand lenses.

The majority of the clasts in the gravels have been eroded from the underlying bedrock formations. Typical clast types in the region include granite, quartzite gneiss, limestone and quartz pebbles eroded from upstream. Depending on the distance from the source, kimberlitic material and derived minerals can be found.

#### 8.3 Diamond Trap Sites

#### 8.3.1 Large-Scale Trap Sites

Large scale gravel deposits form in a river where there is an obstruction to the normal flow of the river or where there is a change in the flow dynamics. Along the Vaal River for example, a west flowing river in South Africa, most of the well-known diamondiferous deposits are associated with a sudden

change in the slope of the bedrock. This change in slope is often associated with an upstream section of resistant bedrock (i.e. dolerites) into which the river excavates a gorge. The sudden loss of energy as the river exits a gorge results in mass deposition of oversize clasts carried through the gorge. Mattheys (1990) has shown that the stone size distribution (and by implication the value of diamonds) within a specific deposit is related to the size of the gravel clasts, i.e. most of the larger diamonds within a certain section of a river are captured close to the exit point of a gorge with the diamond size and value decreasing downstream with the decrease in clast size.

#### 8.3.2 Small-Scale Trap Sites

Diamonds are best concentrated in cobble-boulder basal gravels on or close to the rough bedrock contact in three main trap site settings: scour pools hosting oversize clasts, push bars on the downstream end of a scour and bedrock highs and their associated oversize clasts (Jacob et al, 1999). The key factors in concentrating diamonds at the bedrock-gravel interface are turbulence scales and intensity created by the rough boundary conditions and the presence of fixed bedrock sites of turbulence, which are stable enough to initiate and retain around them the slow and stable growth of gravel that hosts the concentrated diamonds. The upper, more mobile gravels have far lower concentrations of diamonds than the basal gravels, while the stone sizes also decrease significantly (Jacob et al, 1999).

Based on the geology as seen in the prospecting pits, the mineral deposit model of the Krone-Endora Project comprises the concentration of diamonds in alluvial gravel occurrences associated with the current and historic erosion and transportation of materials from the nearby Venetia Kimberlite cluster into paleo-drainage channels situated on the farms Krone and Endora.

#### 8.4 Mineralization Potential

When considering the different conditions as described, together with what was noted in the excavations, the mineralization potential can be evaluated, based on the following criteria:

#### 8.4.1 Trap Sites

- 1. The gorges, which are typical large-scale trap sites, played an all important role during the deposition of the basal gravel bars of the K1 and K3 deposits. With the drop in flow velocity, the larger material dropped out of suspension first, creating small-scale trap sites for diamond deposition. Not enough information is available at this time to evaluate the bedrock contact for other types of small-scale trap sites.
- Clast dimensions are an indicator of expected diamond sizes. The rule of thumb holds
  that the larger the clasts within the gravel matrix, the higher the possibility for larger
  stones. It is therefore anticipated that diamond sizes will drop off further away from the
  gorge areas.

 Diamonds found in the upper unit/s are generally much smaller in size and associated with the gravel lenses. The size distribution once again is a function of the energy under which deposition took place.

#### 8.4.2 Clast Composition

- Clast composition plays a role as there are indicator minerals present that, from the
  experience of the Author, are directly related to the recovery of diamonds. With more
  extensive exposure to the deposit these minerals can be identified more readily. It is
  found that the more these indicators are dispersed over the deposition area, the sparser
  the occurrence of diamonds.
- 2. Clast sizes are directly related to diamond size distribution.
- 3. The overburden (topsoils), in the case of Krone-Endora, consist of fine-grained weathered kimberlite material in conjunction with alluvium. This is an indication of very low energy levels during deposition. Therefore diamond occurrences within this horizon are basically non-existent. Would any be found during exploitation, it would most probably the result of over-mining the overburden and inclusion of some upper zone material.

#### 8.4.3 Source Areas

The K1 drainage system has as its source the Venetia K1 pipe from where the diamonds were derived. This K1 pipe is much richer than the smaller K3 pipe to the west and thus a higher potential for diamond mineralization occurs in the K1 zone as identified.

#### 8.4.4 Energy

As the flow energy, as released from the gorges, diminishes, deposition takes place. Smaller material will therefore be carried further. This allows sorting of the material further away from the sources, hence the reduction of diamond size with increased distance from the originating source is expected.

### 8.4.5 Grading

In order for rock material to be taken up in suspension for transport, the transporting medium must have a density equal or higher than the material to be transported. In the process of transportation abrasion takes place and the intensity thereof is directly related to the "load" and "velocity". Inferior diamonds normally break up in the process while the more pure material survives. Therefore, although quantity drops off further away from the source, quality increases.

## 9. EXPLORATION

## 9.1 Bulk Pit Sampling Program (2004)

Three bulk sample pits were excavated by De Beers at Krone-Endora in 2004 (Figure 9-1). Pit 1 was chosen to coincide with the "higher" grade samples from the 1995 LDA program, at the proximal end of the Basal K1 Zone, on what was thought to be the centre of K1 paleo-drainage. Pit 2 was placed in the "moderate" grade area of the K1 paleo-drainage further "downstream", while Pit 3 was situated in the "lower" grade Confluence Zone. The pits were also distributed over the two prospecting permit areas in order to fulfil work requirements.

The 2004 bulk sample pits were excavated with a hydraulic excavator, with samples placed on dump trucks and transported to the sample stockpile area. Each sample consisted of a 1m thick slice of ground over the 10 m x 30m (300m²) area of each pit. The pits were surveyed following completion of the sampling to bedrock. It was reported that a small amount of bedrock-hosted basal gravel was left behind in Pit 1, because it was too well cemented to excavate, while at Pit 3 (Figure 9-2), it was reported that digging had to stop about 1m short of bedrock for the same reason (During the site visit, it appeared the basal gravel had not been reached). Since classic alluvial diamond trap-sites often lie directly on bedrock, not sampling to bedrock may likely be reflected in lower grades than usual. Sampling in Pit 2 was also compromised by too much barren bedrock being incorporated in the bottom "slice".

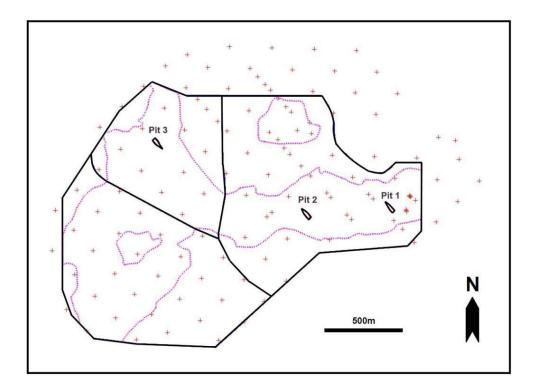


Figure 9-1 Location of the 2004 Bulk Sampling Program (after Millad 2005)

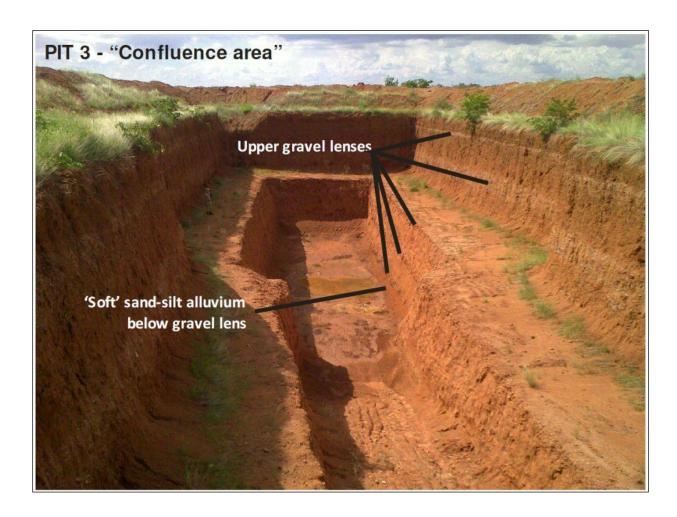


Figure 9-2 Pit 3, Indicating the Upper Gravel Lenses

Although DMI Minerals has been conducting Trial Mining excavations in the K1 area, it is incidental to the extensive development of the Dry-Screening Plant and the commissioning of the Treatment Plant, and cannot be construed as an exploration programme.

## 10. DRILLING

## 10.1 Historical Drilling Programmes

The following is a detailed breakdown of the various drilling programmes:

#### 10.1.1 Small Diameter Drilling (SDD) Programs

A number of Small Diameter Drilling (SDD) campaigns have been conducted by De Beers at Krone-Endora since the early 1980's in order to delineate the deposit, the most recent of these being a Reverse Circulation program completed in 2004.

## 10.1.2 Large Diameter Drilling (LDD) Program (1986)

Other than the fact that twenty-five 500mm and 600mm Large Diameter Drill (LDD) holes were drilled by De Beers, no other information is available for the sample collection methodology during this program. Given that the holes covered a very small portion of the deposit (which was subsequently sampled by the 1995 LDA program), the lack of sample results is not critical.

## 10.1.3 Large Diameter Auger (LDA) Program (1995)

A Williams 1.20m diameter flight auger (hole area = 1.13m²) was used to drill 133 holes during the 1995 Large Diameter Auger (LDA) programme. A single hole was drilled at each sample locality. For the most part, the 1995 LDA holes were drilled on a regular 200m grid rotated at 45° to true north (Figure 10-1). A few of the holes were clustered at less than 200m, so as to test the short range variability in diamond grade and to test some areas of high interest. Samples were collected in 1 metre lifts and placed in nylon bulk bags for transport to the sampling plant.

It was reported that the Williams auger was not able to penetrate to the bedrock surface where it encountered extremely hard calcretized layers in the basal gravels. As a result, only 78 of the 133 holes that were drilled intersected bedrock, and the vast majority of these fell in areas where the basal gravels were not present. Consequently, the 1995 LDA program did a good job defining the mineral resource estimate for the upper gravels, but did not address the basal gravel estimations to the same extent.

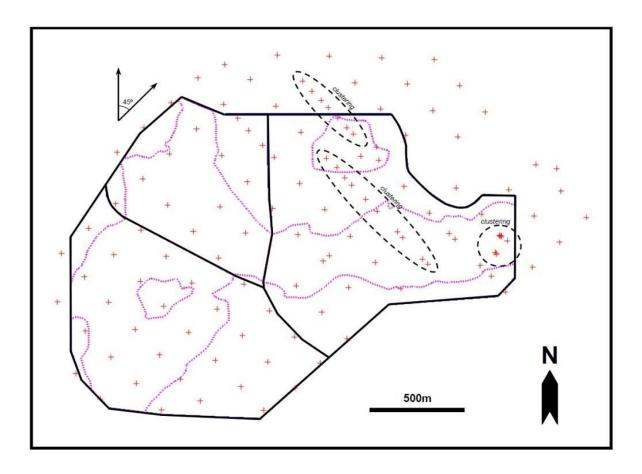


Figure 10-1 Location of the 1995 LDA Program (after Millad 2005)

## 10.2 Reverse Circulation (RC) Drilling Program (2011)

The drilling program started by DMI Minerals in April 2011 was aimed to:

- 1. Find all possible expansion of the deposit as defined by De Beers between 1985 and 2004.
- 2. By means of proper grid drilling, locate the three different zones with its bottom contacts for each zone that can then be used to indicate possible large and small scale trap sites.
- 3. Support decisions on locations and installation of extensive infrastructure to support the further advancement of the Project.

Small diameter drilling (140mm) -SDD- was done using the reverse circulation (RC) drilling method. Plastic sample tubes were filled at 1m intervals for handling purposes and borehole logging was done on site.

Two holes were initially drilled at both sides of each bulk-sampling pit left open by De Beers for correspondence purposes. The logs of the holes were closely correlated with what was observed in each pit. The principle was to eventually blend in the initial De Beers data with all future work to obtain an extensive dataset.

The grid spacing was set out on 100m, but allowances were made for infill drilling where and when necessary to determine outcrop/sub-outcrop positions within an accuracy of 25m.

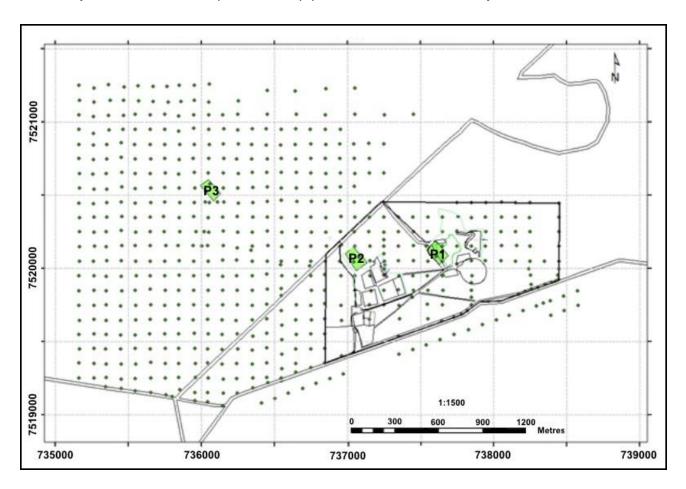


Figure 10-2 RC Drilling positions on the Krone-Endora Project

Each borehole drilled was logged accurately and a small chip sample was taken from each horizon logged. These chips were placed into chip trays in a downhole order to represent the borehole for future references. The chip trays representing a borehole were labelled accordingly.

The number of vertical boreholes drilled to date is 558, with a total length of 4,380 m, for an average drill-depth of less than 8 m.

## 10.2.1 Drilling Methodology and Approach

The methodology followed during the drilling and logging exercises were strictly according to the ISO standards as set out in the drilling work instructions of the Company.

The approach used during the program to date was to proceed from the known towards the unknown. The purpose was to compare the information gathered in close proximity to previous holes/pits for accuracy and consistency, and then eventually combine all data from previous and current exploration into one integrated database.

Drilling along the gridlines started in the middle of the grid working outwards. Once the results indicated that the upper or lower zones are not present anymore, infill drilling was done by halving the grid spacing to 50 m intervals and again to 25m in order to obtain accuracy to within 25m.

#### 10.2.2 Data Analysis.

The borehole information as logged on site was captured in the Microsoft Excel software while the database was compiled using the Rockworks software. The 3-D geological model was then created and analysed by the Datamine 3-D modelling package.

#### 10.2.3 Data Capturing, Verification and Checks.

Each borehole, during the capturing phase, was captured independently by 2 data capturers and run through comparison software afterwards. All discrepancies that occurred were then resolved against the original log.

The modelled topographic surface was compared to the ALS topographic surface as received from De Beers and compared very well. Adjustments were made where necessary.

#### 10.2.4 Data Integrity.

The information as logged in the 6 boreholes, 2 on both sides of the 3 pits left by De Beers, corresponds very well with the lithologies as observed in the pits. As the same standard of logging was maintained right through the program to date, the data is considered to be of good integrity.

A bedrock topography map (Figure 10-3) was generated based on the drill results. Gravel thickness isopachs for the Upper gravel zone (Figure 10-4) and Basal gravel zone (Figure 10-5) are also based on the drill results.

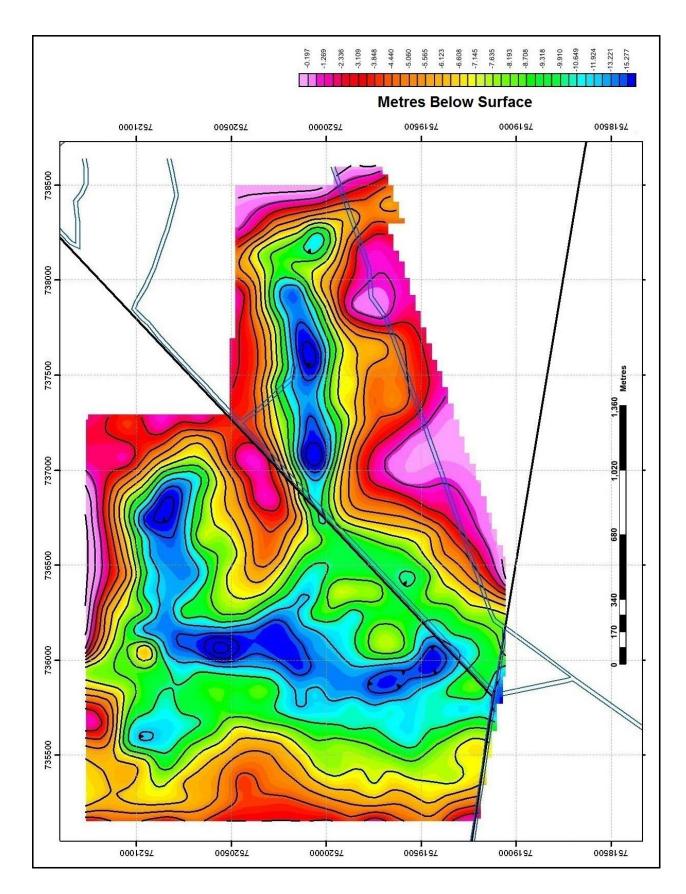


Figure 10-3 Bedrock Topography Map, based on RC drilling

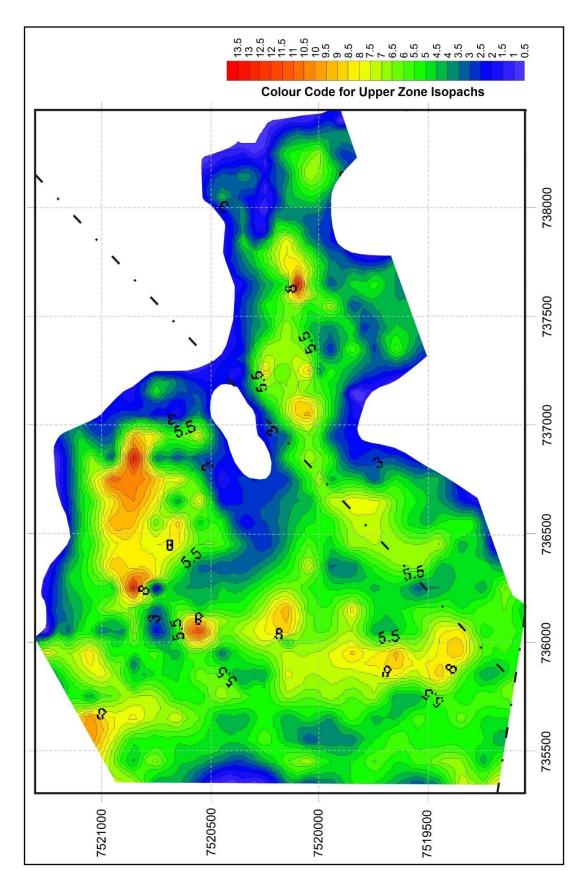


Figure 10-4 Upper Gravels Thickness Isopach, based on RC drilling

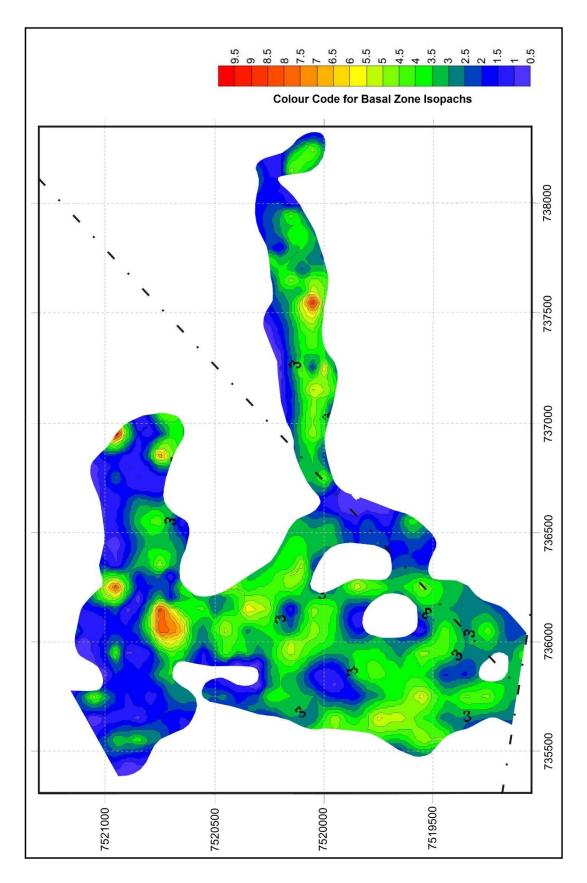


Figure 10-5 Basal Gravels Thickness Isopach, based on RC drilling

# 11. SAMPLE PREPARATION, ANALYSES AND SECURITY

The two sampling events were in 1995 during the LDA drilling programme and in 2004 during the bulk sampling of three pits. The 1986 data was discarded, as it was limited and eventually covered during the 1995 programme.

## 11.1 Sampling Methodology During the 1995 Exploration Exercise.

De Beers Ore Evaluation Department (OED) simulated the deposit, although it is not known on what the simulation was based on. At present it is assumed that some of the Small Diameter Drilling (SDD) that was done prior to 1995 was used, although no information could be found substantiating this assumption. The sampling configuration (Campbell, 1994) was based on this simulation.

A Williams flight Auger was used to collect samples in 1m lifts (hole area =1.13m²) from a single hole per site. The samples were put into nylon bulk bags and transported to the sampling plant (Loubser, 1996). Hole positions (collars) were surveyed accurately.

Remarks: – Two points raised a concern insofar as the ore body evaluation. The first being the assumption of a homogeneous ore body, instead of basing it on the known geological variations that do occur (Ward, 1995). This could lead to the under-estimation of the value of the upper unit. Although the average grade over the width of the body is not influenced, knowing the horizon that is diamondiferous would allow effective stripping to reach the lower unit or basal gravels.

Based on Young, 1997, a purpose-built, on-site sampling plant was used to treat the 1995 samples.

Each sample was passed through a 150mm grizzly (screen) before it entered into a scrubber to clear the material from soils/mud. Once passed through the scrubber the material was screened on a double-deck screen with 12mm and 1mm square panel apertures above and below. The oversize material (greater than 12mm in size) was stored for crushing and re-treatment at a later stage. The under 1mm slimes were pumped away, while the material that was under 12 mm but over 1mm was put through a Density Medium Separation (DMS) plant with a 200mm cyclone with a 40mm spigot. The concentrate obtained for each sample was stored in a secured concentrate cage. Final recovery of the diamonds took place at the De Beers Diamond Research Laboratories. It could not be established whether the oversize fractions or which oversize fractions were crushed and re-treated afterwards (Millad, 2005).

## 11.2 Sampling Methodology During 2004 Bulk Sampling Exercise.

Three pits were planned, based on the results obtained during the 1995 LDA programme, one in the area of "higher" grade samples from 1995, one in the "moderate" grade area and one on the "lower" grade confluence area. The configuration was decided upon jointly by De Beers Africa Exploration and the Mineral Resource Management-Estimation group.

Excavation took place using a hydraulic excavator, stripping one meter at a time over the pit dimension, 10 m x 30m, which was put onto dump trucks and transported to the sample stockpile area where each cut was kept separately.

Remarks: - The inability of the equipment to break through to bedrock in Pits 1 and 3 would lead to under-estimating the basal gravels, which is the prime target at the Krone-Endora Project. The highest concentration of diamonds is normally found near or on the bedrock contact. The over-cutting of the bottom contact in Pit 2, almost 600 mm in places, also created a problem, as it "dilutes" the diamond-bearing gravels with barren bedrock material.

The pit samples were treated to the point where a DMS concentrate was obtained for each sample. A De Beers mobile DMS plant was used with a 250mm cyclone with 57mm spigot.

Each sample passed through a 100mm grizzly. Oversize material was broken down and the remainder passed into a primary scrubber-trommel with 16mm apertures. The over 16mm oversize material was retained for crushing and later re-treatment while the under 16mm material was declined using a 1mm de-sliming screen. The under 16 mm but over 1mm material was subjected to scrubbing again before passing over a prep screen, where it was then passed through the DMS to obtain the concentrate. The concentrate for each sample was stored in a secure container under 24-hour surveillance, awaiting transport to the recovery facility. The over 16mm material was crushed down and treated as a separate sub-sample.

Sample mass was determined using the tally system and a weightometer on the mobile plant.

Analysis of the samples of Pit 1 took place at GEMDL (Group Exploration Macro Diamond Laboratory) in Johannesburg while the samples of Pit 2 were analyzed at KMSP (Kimberley Mines Sampling Plant) in Kimberley. At the time the two bottom slices of Pit 1, from 10 to 12.5m, and the three bottom slices of Pit 2, from 9to 12m, were analyzed. The five sample slices discussed here represent the basal unit of the K1 in Pit 1 and 3.

Remarks: - The samples from the upper gravels were not used.

It is of the Author's opinion that the sample preparation, security, and analytical procedures used by De Beers in the above cases were more than adequate.

## 12. DATA VERIFICATION

The data verification and checks, as described in the 2005 Internal De Beers Mineral Deposit Estimate Report by M.G. Millad, is inserted and are as follows: - (The methodology followed is within the South African Mineral Resource (SAMREC) code, which is internationally recognized).

#### **Data Analysis**

The sample data was analyzed using the MS Excel ® and Isatis® software packages while the 3-D geological model was analyzed with the Vulcan® 3-D modelling package.

#### **Data Verification and Checks**

#### **Geological Modelling Data**

The SDD, 1986 LDD and 1995 LDA data, that were used to generate the sub-surface 3-D geological model in Vulcan®, were verified against available records by James Alexander of De Beer s Africa Exploration. Where co-incident, a number of inconsistencies were noted between SDD and LDD/ LDA holes with respect to bedrock depth (SDD sometimes showing significantly shallower depths), and in such cases the LDD/ LDA depths were preferred (Alexander, 2005). This calls into question the reliability of the bedrock surface in those areas where no LDD/ LDA data were available. Because the majority of the 1995 LDA holes that encountered the cemented basal gravels could not penetrate down to bedrock, the confidence in the bedrock surface, where it underlies basal gravel, will be especially low. Geological data collected as part of the 1995 LDA programme formed the mainstay of the surface modeling process for internal geological contacts. The depths of contacts between various lithological units in the 1995 LDA holes had to be re-interpreted from the original hardcopy logs (Alexander, 2005). Due to the fairly wide spacing of the 1995 LDA holes (generally 200m), a good deal of interpolation of the model surfaces needed to be undertaken even in areas where the holes were able to penetrate the cemented basal gravels. The 2004 pit samples were not used to constrain the 3-D model.

The majority of the SDD, 1986 LDD and 1995 LDA hole collar elevations agreed reasonably well with the highly accurate ALS topographic surface. The hole collar elevations were adjusted to correspond exactly to the ALS surface, which is considered to be accurate to within ten centimeters (Alexander, 2005).

#### Diamond Sample Data

The 1986 LDD sample dataset was examined and rejected for the purpose of mineral resource estimation for the following reasons:

- a) The exact sample collection and treatment methodologies that were used could not be determined.
- b) There is uncertainty concerning the size of individual lift samples. Individual sample volumes and weights could not be determined with any certainty (many missing volume figures and no weights provided).
- c) The individual lift sample lengths are 5m. It would be highly problematic to try and partition the lifts into the geological units comprising the model, especially in the case of the basal gravels, which are generally significantly less than 5m in thickness.
- d) No size-frequency (sieve) data were provided with the 1986 LDD sample results it is not known whether such results are available.
- e) The 1986 LDD samples cover a very small portion of the deposit, which was subsequently sampled by the 1995 LDA campaign. Given this fact, and the other problems highlighted above, the 1986 LDD sample results were not afforded further consideration in this study.

An electronic copy of the 1995 LDA sample dataset was checked against paper records at MRM-CHQ, by De Beers Africa Exploration – the exact origin of these paper records is unknown. No original laboratory records could be found for the 1995 LDA diamond results, despite thorough searches at both the De Beers Geology Division and at GEMDL (James Alexander, pers. comm.). The electronic data for the 1995 LDA samples were then sent on to MRM-P, with collar co-ordinates, diamond results and lithology data being stored in separate files. The following additional checks and merging procedures were then undertaken by MRM-P:

- a) The files containing diamond sieve data and total diamond recovery were merged by matching the values of several other fields (e.g. consignment no., sample ID) that were common to both files (n=1 090).
- b) The results for "spillage" samples could not be assigned to a particular lift sample and were therefore discarded (n=1 080).
- c) The co-ordinates of hole collars were inserted into the merged file using a lookup table. Some random checks confirmed that the lookup procedure had functioned correctly. No collar co-ordinates were available for hole number 56, and so this hole was removed from the dataset (n=1 069).
- d) Lift sample depth intervals were inserted into the electronic dataset by matching up the hole and sample ticket number fields. Records that did not contain a ticket number or sample interval were discarded (n=1 047). Most of the lift sample intervals are 1m in length.
- e) Each sample interval was assigned a lithology based on the interpreted stratigraphic horizons used by James Alexander in the Vulcan® 3-D geological model. This was done by rounding off the lithological contact depth to the nearest sample interval depth. One of four lithology codes was assigned to each lift sample upper gravel, basal gravel, Karoo bedrock or gneiss bedrock. A few of the bedrock sample intervals proved to have recovered some diamonds, but for the most part were barren. It is theoretically possible that the Karoo units may contain some diamonds, since they post-date the

- Venetia kimberlite, but it is more likely that there has been some minor contamination down the affected holes.
- f) Since no sample weights were provided, it was decided to calculate a volume field for each lift sample record in order to define the individual sample size. The individual lift sample volume was calculated as the theoretical hole area multiplied by the lift length (theoretical hole area is equal to 1.13m², since a 1.2m diameter auger was used throughout). Once the volume field had been calculated, grades in the form of cts/m³or stns/m³were computed for each sample.

The 1047 merged 1995 LDA lift sample records were accepted as being checked, although not thoroughly validated against original laboratory records. Of these, some 117 and 843 were assigned to the basal and upper gravel lithologies respectively, with the rest belonging to the bedrock lithologies. The 1995 LDA datasets for the basal and upper units were further reduced to 94 and 641 lift sample records (total = 735), respectively, once the samples falling outside the defined geological zones were omitted for estimation purposes.

The results of the 2004 trench samples (n=5) were obtained by De Beers Exploration directly from GEMDL and the KMSP, and have been passed on directly to MRM-P. They are therefore verifiable.

#### **Data Integrity**

Because of the inconsistencies between SDD and LDD/LDA holes, and the fact that the lithological contacts had to be re-interpreted 10 years after the fact, the data used to create the 3-D model surfaces of the Krone-Endora deposit are considered to be of low-to-moderate integrity at best. This uncertainty should be reflected in the overall confidence in the geological model.

The fact that the 1995 LDA sample results could not be verified against an original, integrated dataset lowers the confidence in these results. Because a theoretical volume had to be used for the individual sample size, the confidence is further reduced. Even though numerous checks were completed to ensure the integrity of the estimation dataset, the fact that several files had to be merged also impacts negatively on the confidence; the uncertainty due to merging includes a component attributable to the assignation of lithological boundaries to the nearest sample interval boundary (usually within 0.5m). For these reasons, the 1995 LDA dataset is considered to be of low-to-moderate integrity.

The 2004 trench sample results have been passed on to MRM-P in electronic format, unchanged from GEMDL and the KMSP, and are therefore considered to be of high integrity. However, two Vulcan® design layers, each depicting the three pits, displayed an offset of ~100m in the pit positions. This matter was referred to Africa Exploration for resolution—the pit positions used in this study therefore reflect the recommendations of Africa Exploration.

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# 13. MINERAL PROCESSING AND METALLURGICAL TESTING

Based on the exploration techniques applied, and the samples processed as discussed, the following results were obtained by Millad, 2005:

## 13.1 1995 Analysis

#### 13.1.1 Basal Gravels

The following table reflects a summary statistics of the results obtained at the Project.

Zone	Gravel body	Statistic analysis	m³	Total cts	Total stns	Total cts/m³	Total stns/m³	Total cts/stn
		sum	11.19	0.295	6			
C fl	Darrel	average	0.93	0.025	0.50	0.026	0.536	0.049
Confluence	Basal	std dev	0.47	0.05	0.65	0.05	2.39	0.06
		count	12					
		sum	60.23	3.210	75			
K1	Danal	average	1.16	0.062	1.44	0.053	1.245	0.043
K1	Basal	std dev	0.66	0.11	1.76	0.10	1.56	0.04
		count	52					
		sum	46.78	0.135	3			
1/2	<b>.</b>	average	1.56	0.005	0.10	0.003	0.064	0.045
K3	Basal	std dev	1.15	0.02	0.40	0.02	0.35	0.02
		count	30					

**Table 13-1 Summary Statistics for the Basal Gravels** 

The counts for each area indicate the amount of samples used. In relation to the amount of holes drilled in each zone, it becomes clear that the basal gravels were not sampled fully. Adding to that, since not all samples were fully analysed (Millad 2005), it becomes clear that the basal gravel unit as a whole was under evaluated.

## 13.1.2 Upper Gravels

The following table, as is the case with the basal gravels, reflected the statistics of the results obtained:

Zone	Gravel body	Statistic analysis	m³	Total cts	Total stns	Total cts/m³	Total stns/m³	Total cts/stn
		sum	139.22	3.330	118			
Cfl	Hansa	average	1.12	0.027	0.95	0.024	0.848	0.028
Confluence	Upper	std dev	0.09	0.05	1.34	0.04	1.20	0.03
		count	124					
		sum	322.28	24.465	539			
1/4	I I	average	1.12	0.085	1.88	0.076	1.672	0.045
K1	Upper	std dev	0.09	0.21	1.90	0.18	1.65	0.14
		count	287					
		sum	260.35	0.385	15			
1/2		average	1.13	0.002	0.07	0.001	0.058	0.026
K3	Upper	std dev	0.10	0.01	0.30	0.01	0.26	0.03
		count	230					

**Table 13-2 Summary Statistics for the Upper Gravels** 

When considering the average thickness of the upper gravels and the amount of samples taken for each zone, it seems as if not all samples drilled were analyzed. As in the case of the basal gravels, not all samples were fully analyzed, also leading to under estimation.

#### 13.2 2004 Analysis

The analysis (from Millad, 2005) of the bulk sampling done in 2004 by De Beers resulted in 1,303 tonnes of basal gravel yielding 282.09 carats (at a 1 mm cut-off) of diamonds in Pit 1. Pit 2 yielded 54.78 carats from 1,623 tonnes when the bottom slice diluted with barren basement rock was included (48.97 carats were recovered from 1,181 tonnes when the bottom cut was excluded). Results from Pit 3 were not included in the 2005 analysis.

The data only reflects the results from the basal gravels and none from the upper gravel beds. In Pit 1 the bottom cut against the bedrock was not removed and analysed.

Based on the detailed screen analysis of the diamonds, stone sizes from up to +3 carats were recovered. The larger the stones are, the higher is its value in terms of US\$/carat. The other characteristics are not described, but one can assume that it would correspond with the Venetia diamonds, i.e. high reported percentage of gemstones.

Based on the position of the pits in relation to the basal gravels, the bulk samples were taken in midstream.

As the Independent Qualified Person, I support the methodology used in obtaining these results, and have considered them in the determination and calculations of the estimate of diamond grade provided for the inferred mineral resource estimate provided in this report.

## 14. MINERAL REOURCE ESTIMATES

Neither the South African Mineral Resource Committee (SAMREC), the Joint Ore Reserves Committee (JORC) (Australian) codes, nor for that matter Canadian Institute of Mining and Metallurgy (CIM) definitions, deal specifically with the peculiarity of alluvial diamonds when it comes to resource or reserve estimations. The reason for this is that as exploration/prospecting proceeds (usually through trial/test mining and processing) the resource base changes as new deposits are proved up. For reserve definition, different cut-off grades are applied to different deposits or sections of a mine at different times. Cut-off grades can vary as average ore value changes (e.g. diamond market conditions, exchange rate, diamond size variations) or as operating cost factors vary (e.g. amount of overburden, haul distance). Reserves for alluvial diamond mining inevitably change as deposits are mined. The Inferred Resource categories used in this Report follows the SAMREC definition. These definitions are materially similar to those set out in Section 1.2 of the NI 43-101 (based on the CIM Definition Standards and having regard to the CIM published "Guidelines for the Reporting of Diamond Exploration Results").

CIM Standards define Inferred Resources as:

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

In comparison, Section 7.2.1 of the SAMREC Code defines an *Inferred (Diamond) Resource* as:

An 'Inferred Diamond Resource' is that part of a Diamond Resource for which tonnage, grade and average diamond value can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified by geological and/or grade continuity and a sufficiently large diamond parcel is not available to ensure a reasonable representation of the diamond assortment. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes that may be limited or of uncertain quality and reliability.

This category is intended to cover situations where a mineral concentration or occurrence has been identified and limited measurements and sampling completed, but where the data are insufficient to allow the geological and/or grade continuity to be confidently interpreted. Due to the uncertainty which may be attached to some Inferred Mineral Resources, it cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Further, confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

The purpose of this report was to review all available information and datasets with the aim to evaluate the potential of the Project. During the resource evaluation, the following points were considered and evaluated to reach the supplied inferred resource for the Project.

#### 14.1 Co-ordinate System and Topography.

All survey data during the three periods of exploration was captured in the Universal Transverse Mercator (UTM) coordinate system, which is a grid-based method of specifying locations on the surface of the Earth. The system was initially developed by the United States Army Corps of Engineers in the 1940's and was based on an ellipsoidal model of the earth. Outside the United States the International ellipsoid was used, but is currently replaced by the WGS84 ellipsoid as the underlying model of the earth in the UTM coordinate system.

The records, as received from the De Beers offices, were in this format and used as such, without changing it.

## 14.2 Specific Gravity (SG).

During the 1995 LDA sampling programme De Beers applied two methods of density measurements at different times (Loubser, 1996; Young, 1997), described by Millad in the De Beers Internal Mineral Deposit Estimate Report (Millad, 2005) as follows:

- "Method 1 A sample of approximately 500g was taken from the tailings of each sample. The water displacement method was used to determine the density. An average density of 2.35tons/m3 was obtained for all the samples that were handled in this way. However, because of the small size of the samples, the fact that they were collected from tailings and not from the head-feed material, and also due to water absorption problems, it was concluded that the results were inaccurate (Marais Loubser, pers. comm.; Young, 1997). This technique was therefore later replaced by Method 2.
- A drum of known volume (30litres) was filled with water and weighed. Head-feed material was then used to fill the drum and it was re-weighed. The density was calculated by dividing the weight of the head-feed material by the weight of water. A very low average density of 1.64tons/m³ was calculated using this technique. MRM-P considers the average density values from both methods to be invalid. In the case of Method 1, MRM-P concurs with the reasoning of Loubser (pers. comm.) and Young (1997) for the inaccuracy of the result. In the case of Method 2, the calculated density is for bulked material, and a bulking factor has not been determined for the Krone-Endora deposit. Experience on De Beers' West Coast operations also shows that 1.64tons/m³ is much too low for the in-situ, un-bulked density of alluvial deposits, especially those containing significant amounts of gravel. It was therefore decided to default to the measured density for deposits of the Lower Orange River, which are currently being mined by Namdeb. The un-bulked density value being applied to these deposits is 2.2tons/m³ (Jurgen Jacob, pers. comm.). It should be noted that the absence of an accurately measured density for the Krone-Endora deposit will impact negatively on the confidence in the mineral resource estimate."

The SG's used during the remodelling of the data in the Datamine® software in order to obtain a resource tonnage were adopted from the De Beers model after review by the Author, in this case 2.2 t/m³. It is the Author's opinion that this SG can be applied to the lower Basal Gravel zone, as this zone very much resembles the basal gravels of the middle and lower Orange River deposits, but may prove to be too high for the Upper Gravel zone at Krone-Endora. For the purposes of this review and analysis and to conform to the original De Beers' parameters, the Author supports the suggested modelling of the upper gravels using a density of 2.2 t/m³ until further density studies can be done.

#### 14.3 Database Verification.

The database verification process as carried out by Millad for the De Beers Internal Mineral Deposit Estimate in order to report on the resources was described as follows:

"An electronic copy of the 1995 LDA sample dataset was checked against paper records at MRM-CHQ, by De Beers Africa Exploration – the exact origin of these paper records is unknown. No original laboratory records could be found for the 1995 LDA diamond results, despite thorough searches at both the De Beers Geology Division and at GEMDL (James Alexander, pers. comm.). The electronic data for the 1995 LDA samples were then sent on to MRM-P, with collar co-ordinates, diamond results and lithology data being stored in separate files. The following additional checks and merging procedures were the number taken by MRM-P:

- a) The files containing diamond sieve data and total diamond recovery were merged by matching the values of several other fields (e.g. consignment no., sample ID) that were common to both files (n=1 090).
- b) The result s for "spillage" samples could not be assigned to a particular lift sample and were therefore discarded (n=1 080).
- c) The co-ordinates of hole collars were inserted into the merged file using a lookup table. Some random checks confirmed that the lookup procedure had functioned correctly. No collar co-ordinates were available for hole number 56, and so this hole was removed from the dataset (n=1 069).
- d) Lift sample depth intervals were inserted into the electronic dataset by matching up the hole and sample ticket number fields. Records that did not contain a ticket number or sample interval were discarded (n=1 047). Most of the lift sample intervals are 1m in length.
- e) Each sample interval was assigned a lithology based on the interpreted stratigraphic horizons used by James Alexander in the Vulcan® 3-D geological model. This was done by rounding off the lithological contact depth to the nearest sample interval depth. One of four lithology codes was assigned to each lift sample upper gravel, basal gravel, Karoo bedrock or gneiss bedrock. A few of the bedrock sample intervals proved to have recovered some diamonds, but for the most part were barren. It is theoretically possible that the Karoo units may contain some diamonds, since they post -date the Venetia Kimberlites, but it is more likely that there has been some minor contamination down the affected holes.
- f) Since no sample weights were provided, it was decided to calculate a volume field for each lift sample record in order to define the individual sample size. The individual lift sample volume was calculated as the theoretical hole area multiplied by the lift length (theoretical hole area is equal to 1.13m², since a 1.2m diameter auger was used throughout). Once the volume field had been calculated, grades in the form of cts/m³or stns/m³were computed for each sample.

The 1047 merged 1995 LDA lift sample records were accepted as being checked, although not thoroughly validated against original laboratory records (see Appendix I). Of these, some 117 and 843 were assigned to the basal and upper gravel lithologies respectively, with the rest belonging to the bedrock lithologies. The 1995 LDA datasets for the basal and upper units were further reduced to 94 and 641 lift sample records (total = 735), respectively, once the samples falling outside the defined geological zones were omitted for estimation purposes (see Appendix II).

The results of the 2004 trench samples (n=5) were obtained by De Beers Exploration directly from GEMDL and the KMSP, and have been passed on directly to MRM-P. They are therefore verifiable."

The final compiled database, as described above, was used during the De Beers modelling exercise associated with their Internal Mineral Deposit Estimate Report and after review the results were accepted for this report by the Author.

The above database was incorporated into the 2009 database after the initial drilling program was completed and to which the 2011 data was added afterwards.

#### 14.4 Geological Model.

The geological model, as verified and used by De Beers, is described by Millad in the 2005 De Beers Internal Mineral Deposit Estimate Report as follows:

"The SDD, 1986 LDD and 1995 LDA data, that were used to generate the sub-surface 3-D geological model in Vulcan®, were verified against available records by James Alexander of De Beers Africa Exploration. Where coincident, a number of inconsistencies were noted between SDD and LDD/LDA holes with respect to bedrock depth (SDD sometimes showing significantly shallower depths), and in such cases the LDD/LDA depths were preferred (Alexander, 2005). This calls into question the reliability of the bedrock surface in those areas where no LDD/LDA data were available. Because the majority of the 1995 LDA holes that encountered the cemented basal gravels could not penetrate down to bedrock, the confidence in the bedrock surface, where it underlies basal gravel, will be especially low. Geological data collected as part of the 1995 LDA programme formed the mainstay of the surface modelling process for internal geological contacts. The depths of contacts between various lithological units in the 1995 LDA holes had to be re-interpreted from the original hardcopy logs (Alexander, 2005). Due to the fairly wide spacing of the 1995 LDA holes (generally 200m), a good deal of interpolation of the model surfaces needed to be undertaken even in areas where the holes were able to penetrate the cemented basal gravels. The 2004 pit samples were not used to constrain the 3-D model. The majority of the SDD, 1986 LDD and 1995 LDA hole collar elevations agreed reasonably well with the highly accurate ALS topographic surface. The hole collar elevations were adjusted to correspond exactly to the ALS surface, which is considered to be accurate to within ten centimeters (Alexander, 2005)."

The final database used by De Beers for their Vulcan® modelling was accepted for the remodelling exercise in Datamine® as the original data (hard copies) used for verification were not available to the Author.

It must however be noted that the modelling done in Datamine® was to obtain a tonnage for the different gravel bodies in the 3 zones. Grade estimations were based on the work done by De Beers using the 1995 LDA and 2004 Bulk Sampling programmes datasets contained in the Internal Mineral Deposit Estimate Report (Millad, 2005) using a +2 sieve (1 mm) cut-off. A model variogram with a range of 350 m and a nugget effect of ~39% was produced using all of the 1995 LDA samples. Finally, a conservative 300 m x 300 m block size (oriented north-south, east-west) and an Ordinary Kriging method was used for grade estimation. The grade distribution model as done by De Beers was accepted for the purpose of this report because the geo-statistical analysis done on the data by the Author falls within the minimum requirements as set out in the SAMREC code, and those mirrored in CIM guidelines. The results of the two different models were merged using Microsoft Excel® for comparison purposes.

## 14.5 Boundary Analysis and Dilution.

The outside boundary of the Krone-Endora Project used in the 2009 Technical Report was defined by De Beers. As stated by Millad in his 2005 Independent Mineral Deposit Estimate Report, the southern and western boundaries were limited to the extent of the modelled range using the available drilling and sampling data. Towards the north and east the onset of the modern K1 drainage system was used as the limiting factor. The outside boundaries used in the current Technical Report were defined from the extensive 2011 RC drilling programme.

The boundaries between the K1, K3 and Confluence zones for each of the two stratigraphic units, the upper gravel and basal gravel units, were considered to be "soft" when considering the diamond mineralization. The precision with which these boundaries can be defined is limited (John Ward, pers. comm. to Millad).

The parameters for the geological model as set out by the De Beers' Mineral Resource Management division were used "as are" in the remodelling exercise using Datamine®. This was done to allow the merging of the previously modelled grade results of De Beers and the Author's volumetric model. In the process the views of John Ward and M.G. Millad were confirmed.

## 14.6 Modelling Methodology and Cross Validation of Models.

During the geological modelling using Datamine® two methods were used to confirm the volume of each gravel unit. The first method involved the wire framing of the datasets of the topography, the contact between the upper and basal units and the basement contact. The second method involved modelling using the parameters as used previously by De Beers.

When wire framing, the topography, subsequent horizons, and the final datasets as validated by De Beers were used. An Airborne Laser Survey (ALS) dataset collected by De Beers was used for the topography while the 2004 SDD and the 1995 LDA datasets were used to create the bedrock horizon. The 1995 LDA set was used for the contact between the upper and basal units. The volume for each unit was determined using the Datamine® function for volumetric determination and the given accepted SG of 2.2t/m³.

During the second method the following parameters were used. (The parameters were duplicated from the geo-statistical results from De Beers.)

Method employed	Ordinary Kriging
Blocksize	300m x 300m
Range	350m
Nugget effect	39%
Angular tolerance	90°
Lag	71m
Count	14 lags
Tolerance	40%

Table 14-1 Geo-Statistical Parameters Used

The difference in volumes between the two methods is within 7% of each other. The volumes determined in the second method were accepted for quoting tonnages in the report as the geostatistical support for it is much stronger.

Considering the difference in grade when comparing the 1995 results of the K1 zone with the bulk sampling in 2004 in relation of drilling to bulk sampling, indications are that the deposit has definite potential for development in that the actual grade can be as much as five times higher.

For the purposes of this NI43-101 Technical Report, the Author has provided the Inferred Resource estimate which has been determined to be appropriately conservative in nature for the purposes of an initial review and analysis. This classification could be expected to be further reviewed and evaluated on an ongoing basis as additional information on the deposit is secured from the trial mining work programmes recommended.

This initial review and analysis is preliminary in nature, and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the initial review and analysis will be realized.

#### 14.7 Diamond Quality (Value)

## 14.7.1 2009 Diamond Quality (Value) Estimations

As part of the diamond quality (value) estimation and determination of a suitable size-frequency distribution (SFD) model for use in the De Beers Internal Mineral Deposit Estimate (Millad, 2005), SFD's from production records for the K1/K2 area of Venetia were compared with the samples from the 1995 Large Diameter Auger exploration results for Krone-Endora, and found to be very similar. These findings were reviewed, and determined reasonable by the Author to use as a guide for the estimation of the SFD for the Upper gravel unit in this report.

There were not enough carats recovered in previous exploration from each zone of Krone-Endora to define zonal SFD's, and thus a single global SFD was modelled for all three upper zones based on

the K1/K2 production assortment. A SFD model was also produced for the basal unit using the sample data from bulk pits 1 and 2 at Krone-Endora and applied only to the limited basal area defined in the K1 area (see Figure 14-1).

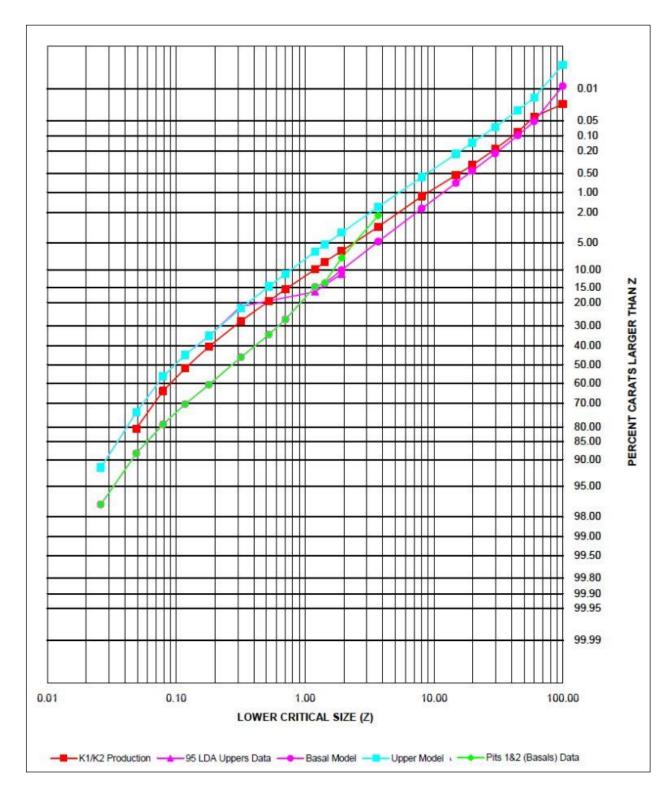


Figure 14-1 Model Size-Frequency Distribution Plot

## 14.7.2 Diamond Quality Market Valuation

A letter from I. Henning and Co. Ltd. attesting to the accuracy of the Diamond Sales is incorporated, Figure 14-2, while the Summary table is found in Table 14-2.



Figure 14-2 Diamond Valuation Verification Letter

Valuation of diamonds recovered during the testing and commissioning of the Krone-Endora Treatment Plant was done by the industry-standard practice of putting representative diamond parcels up for tender/sale. All diamonds recovered during any period from sale to sale during the testing and commissioning were tendered/sold at the next sale. Diamond Realisations (South Africa), a subsidiary of I. Henning and Co. Ltd., have run independent diamond tenders and sales on behalf of DMI Minerals since June 2013, where 25,763.21 cts were sold for USD \$ 5,865,048.33 – an average of USD \$227.65/ct. (see Table 14-2).

	DMI Minerals South Africa (Pty) Ltd						
Krone-Endora Mine - Diamond Sales Summary							
Invoice	Date	Buyer	Rough Diamonds (cts)	Exchange Rate (ZAR:USD)	Sale Price (ZAR)	Sale Price (USD)	Price/ct (USD)
0003	30/06/13	Diamond Trading House of SA	3,123.32	10.08	R 4,188,184.72	\$ 415,495.03	\$ 133.03
0004	22/08/13	State Diamond Trader	479.20	10.16	R 852,941.75	\$ 83,950.96	\$ 175.19
0005	28/08/13	Diamond Trading House of SA	4,273.75	10.35	R 7,991,939.49	\$ 772,167.97	\$ 180.68
0007	15/10/13	State Diamond Trader	258.51	9.94	R 351,436.28	\$ 35,348.65	\$ 136.74
8000	18/10/13	Diamond Trading House of SA	2,396.12	9.82	R 10,902,825.22	\$ 1,110,256.03	\$ 463.36
0009	28/11/13	State Diamond Trader	198.21	10.12	R 287,121.06	\$ 28,371.78	\$ 143.14
0010	04/12/13	Diamond Realisations SA	1,103.05	10.12	R 2,564,932.89	\$ 253,451.87	\$ 229.77
0011A	29/01/14	State Diamond Trader	120.26	10.93	R 207,681.80	\$ 19,001.08	\$ 158.00
0012	30/01/14	Diamond Realisations SA	1,700.53	11.24	R 2,135,386.66	\$ 189,981.02	\$ 111.72
0013	14/03/14	State Diamond Trader	252.87	10.74	R 529,585.64	\$ 49,309.65	\$ 195.00
0015	27/03/14	Diamond Realisations SA	2,321.85	10.76	R 11,538,944.38	\$ 1,072,397.36	\$ 461.87
0018	13/06/14	State Diamond Trader	252.06	10.70	R 459,729.63	\$ 42,976.23	\$ 170.50
0019	19/06/14	Diamond Realisations SA	2,255.09	10.73	R 4,762,970.92	\$ 444,041.89	\$ 196.91
0021	20/08/14	State Diamond Trader	185.68	10.61	R 285,551.70	\$ 26,923.60	\$ 145.00
0022	28/08/14	Diamond Realisations SA	1,619.57	10.68	R 3,173,028.15	\$ 297,074.98	\$ 183.43
0023	22/09/14	State Diamond Trader	158.64	10.92	R 204,402.18	\$ 18,719.42	\$ 118.00
0024	23/09/14	Diamond Realisations SA	1,485.43	11.11	R 2,346,084.58	\$ 211,167.71	\$ 142.16
0025	20/10/14	State Diamond Trader	152.32	11.16	R 204,032.58	\$ 18,278.40	\$ 120.00
0026	24/10/14	Diamond Realisations SA	1,377.36	11.02	R 3,088,052.42	\$ 280,220.00	\$ 203.45
0027	26/11/14	State Diamond Trader	208.23	11.00	R 435,153.22	\$ 39,563.70	\$ 190.00
0028	27/11/14	Diamond Realisations SA	1,841.16	11.00	R 5,019,678.45	\$ 456,351.00	\$ 247.86
Total			25,763.21		R 61,529,663.72	\$ 5,865,048.33	\$ 227.65

**Table 14-2 Diamond Sales Summary** 

Values obtained for diamonds through this means represent actual sales completed in the competitive market by registered, practicing, international diamond buyers. The values thus obtained are actual, realized sale prices, and not simply a valuation with no obligation to purchase.

The above carat valuation numbers, however, include two extraordinary stones recovered to date, namely; a 91.72 carat diamond that sold for USD \$817,920.00 and a 43.9 carat diamond that sold for USD \$317,924.10. Rather than skew the average price per carat, it was decided to remove these

two stones from the calculation, resulting in 25,627.59 carats selling for USD \$4,729,204.23, or a carat valuation of USD \$185.54/ct. Table 14-3 outlines the new calculations

DIAMOND SALES SUMMARY	Rough Diamonds (cts)	Sale Price (USD)
Special Diamond #1	91.72	\$ 817,920.00
Special Diamond #2	43.90	\$ 317,924.10
Total: Special Diamonds	135.62	\$1,135,844.10
Total: Carats Sold (From Table 14-2)	25,763.21	\$5,865,048.33
Less: Special Diamonds	25,627.59	\$4,729,204.23
New Diamond Value (US\$/carat)		\$185.54

**Table 14-3 New Diamond Carat Value** 

This carat valuation of USD \$185.54/ct will be used in the Mineral Resource Estimation for all diamonds, whether from the Upper gravels or Basal gravels. Mining methods being used in the development, testing, and commissioning of both the in-field Dry-Screening Plant and the Treatment Plant are such that differentiation between the two units are not possible – all excavated material from the work area is passed through the in-field Dry-Screening Plant, which includes a 500 TPH rotary trommel, categorization screens, high-frequency Dabmar Bivitec screens, storage and autoloading bin, as well as extensive conveyor structure.

Excavations to date have been weighted towards the upper levels, and consequently Upper gravels have likely contributed more towards diamonds recovered than Basal gravels. Since previous work has evaluated the diamonds recovered from Upper gravels at approximately 55% of the value of diamonds recovered from Basal gravels (USD \$70 versus USD \$130, according to the 2009 Technical Report), the USD \$185.54/ct overall can be considered a conservative figure for all diamonds recovered.

The figures used to calculate the inferred mineral resource estimations (see Table 14-4) are all justified within the models generated as from the De Beers results, and have an effective date of 02 February, 2015.

#### 14.8 Treatment of Stockpiled Resources

As seen in Table 14-4, ~860,000 T of K1 Upper gravels and ~469,000 T of K1 basal gravels (based on Mine Surveyors' volume calculations, and the ascribed 2.2 t/m³ specific gravity) have been excavated as part of the ongoing development, testing, and commissioning of both the deposit specific in-field Dry-Screening Plant, and the separate Treatment Plant. Using the estimated grades, this excavated material equates to an estimated resource of approximately 30,000 carats from the

Upper gravels, and approximately 60,000 carats from the Basal gravels, most of which could be reasonably assumed to remain in the untreated, +26 mm oversize material that is awaiting the finalization of upgrades underway at the Treatment Plant aimed at allowing these larger conglomerated materials to be effectively processed.

While approximately 30,000 carats can be accounted for from the combined incidental recoveries of rough diamonds recovered and tendered/sold from the processing of the +1.0mm to -26.0mm materials to date, and those further amounts of rough diamonds which were held in stock awaiting the next tender/sale, the remaining inferred estimate portion of the 60,000 carats assumed to remain in the stockpiled material should remain in the inferred resource estimate until such time as this material can be effectively processed.

		K1 Zone			Condition		Confidence
PROPERTY AREAS		- 1		K3 Zone	Collinaence	Combined	Collinaerice
	Initial	Trial mined	Remaining		auo7		Levels on lotals
		INFERRED RESOURCES	ESOURCES				
Total surface area of Mining Right (Ha)			657.7111	7111			High
Total surface of area investigated (m²)		1,710,000		1,998,000	1,690,000	5,398,000	High
Upper Gravels							
Total of surface covered with gravel (m²)	1,382,000	77,000	1,305,000	1,025,000	829,000	3,159,000	High
Average gravel thickness (m)		5.07		62.59	97.9		High
Total gravel volume (m³)	7,006,000	391,000	6,615,000	5,730,000	5,604,000	17,949,000	High
Average density (t/m³)		2.20		2.20	2.20	2.20	Medium
Total tonnes (Reported)	15,412,000	860,000	14,552,000	12,606,000	12,329,000	39,487,000	Medium
Basal Gravels							
Total of surface covered with gravel (m²)	713,000	62,000	651,000	1,347,000	672,000	2,670,000	High
Average gravel thickness (m)		3.46		3.55	2.04		High
Total gravel volume (m³)	2,467,000	213,000	2,254,000	4,782,000	1,371,000	8,407,000	High
Average density (t/m³)		2.20		2.20	2.20	2.20	Medium
Total tonnes (Reported)	5,427,000	469,000	4,958,000	10,520,000	3,016,000	18,494,000	Medium
Upper Gravels							
Estimated grade (cpht)		3.45		0.07	1.09		High
Estimated diamonds within zone (carats)	532,000	30,000	502,000	9,000	134,000	645,000	Medium
Diamond value (US\$/carat)		\$185.54		\$185.54	\$185.54	\$185.54	High
Basal Gravels							
Estimated grade (cpht)		12.74		0.13	1.20		High
Estimated diamonds within zone (carats)	692,000	60,000	632,000	14,000	36,000	742,000	Medium
Diamond value (US\$/carat)		\$185.54		\$185.54	\$185.54	\$185.54	High
Total							
Total tonnes		19,510,000		23,126,000	15,345,000	57,981,000	Medium
Total estimated diamonds (carats)		1,194,000		23,000	170,000	1,387,000	Medium

Table 14-4 Summary of Inferred Mineral Resource Estimate for Krone-Endora

Numbers rounded to nearest 1,000. Numbers in grey, italicized font are not included in final Combined figures.

# 15. MINERAL RESERVE ESTIMATES

Mineral Reserve estimates are a requirement for Advanced Property Technical Reports. Without additional work defining the grade of the Krone-Endora Alluvial Diamond deposit, a reasonable Mineral Reserve estimate is not possible.

The Canadian Institute of Mining, Metallurgy and Petroleum, in its *CIM Definition Standards on Mineral Reserves and Mineral Reserves* defines a "Mineral Reserve" as follows:

"A Mineral Reserve is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined."

Currently the Krone-Endora Alluvial Diamond deposit is classified as an "Inferred" Mineral Resource (see Section 14), as defined in the CIM Definition Standards on Mineral Resources and Mineral Reserves as:

"An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes."

"Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies".

# 16. MINING METHODS

This section is a requirement for Advanced Property Technical Reports and is therefore not applicable to this Technical Report.

# 17. RECOVERY METHODS

This section is a requirement for Advanced Property Technical Reports and is therefore not applicable to this Technical Report.

# 18. PROJECT INFRASTRUCTURE

This section is a requirement for Advanced Property Technical Reports and is therefore not strictly applicable to this Technical Report. An overview of the current project infrastructure was, however, determined to be of value given the significant infrastructure development completed to support the further advancement of the Project.

The Company commenced operations to advance the Krone-Endora at Venetia Project shortly after the closing of the acquisition, and to date, has completed the procurement, delivery, and construction of a majority of the infrastructure required to support the continued advancement of the Project as envisioned for the long-term. Due to the nature of the deposit and the previous work programmes which had been completed at the time of acquisition, a move to trial mining and additional bulk sampling was expected, and the establishment of the required infrastructure to support these objectives was completed. These developments are also expected to serve the long-term needs of the Project.

Infrastructure completed to date includes:

- the construction of +/- 10km of primary access roads for the Project,
- the establishment and installation of +/- 4km of security fencing,
- the construction of the treatment plant site, offices, and lined water dams,
- the design, development, and construction of a deposit specific in-field Dry-Screening Plant,
- the design, development, and construction of a deposit specific Treatment Plant,
- the installation of three water pipelines totalling +/-14km in distance
- the procurement and installation of +/-13km of power lines,
- the procurement and installation of backup standby generator power,
- the purchase and deployment of various pieces of operational heavy equipment, and
- various other general infrastructure items required to support a medium size mining operation

A topographic map with an overview of the various infrastructure upgrades such as access roads, water pipelines, power lines, and security fences can be found in Figure 18-1.

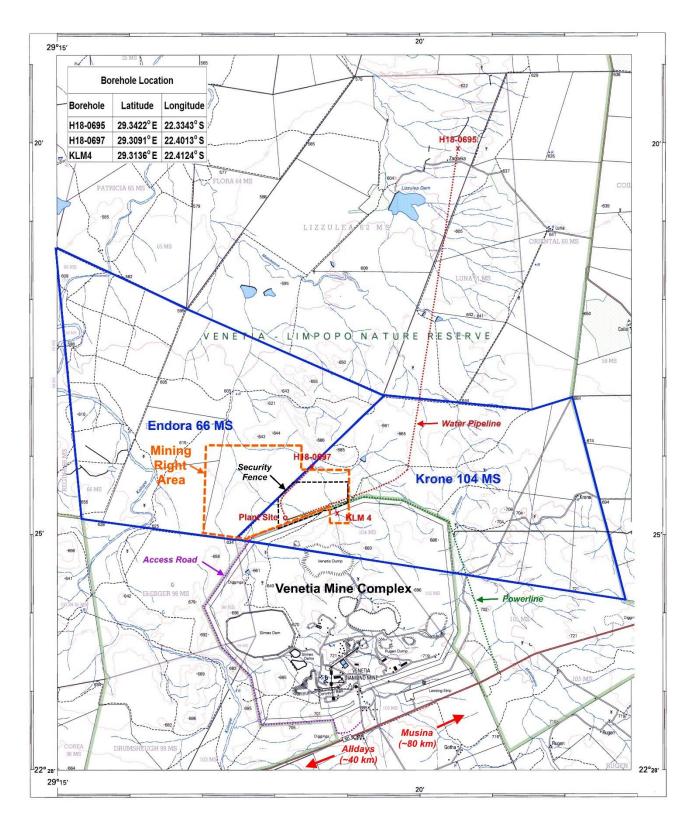


Figure 18-1 Project Infrastructure Overview Map

#### **18.1 Access Road Development**

One of the first infrastructure upgrades the Company completed was the clearing and construction of a 9 km primary access road, including the installation of seven sets of water management culverts, for the Project. The upgraded roads have allowed for the delivery of equipment and trucks up to 75+ tons and provide the Project with a high quality primary access road for the duration of the Project.



Figure 18-2 Before and After Pictures of Access Road

#### **18.2 Security Fence Construction**

The Company installed approximately 4km of high strength, solar powered, electrical security fencing and gates around the areas chosen for future trial mining and the plant site.



Figure 18-3 Gate and Solar panel in Security Fence

#### 18.3 Plant Site and Water Dams Construction

After an evaluation of all geological work completed by both De Beers and Diamcor, the selection of a suitable plant site was determined by the Company. The Company proceeded with the removal of material for the establishment of a quarry in the K1 area of the Project selected for future trial mining exercises, and the material removed in preparation of that quarrying area was then used in the construction of the Project's plant site. The clearing of ~3 hectares for the construction of the Treatment Plant site was completed along with the construction of fresh water and settling dams, and the completion of civil engineering works to support the installation of the Project's deposit specific Treatment Plant and operational offices. As part of the site development, the Company completed the construction of a 4m raised wall around the plant site to support the Plant's designed use of gravity feeding where possible which was aimed at lowering power consumption and operational costs associated with the pumping of materials. Extensive concrete work for the Treatment Plant was completed, as was the construction and delivery of the Treatment Plant, operational offices, and workshops typical of what would be expected to support a medium sized mining operation.



Figure 18-4 Construction of Treatment Plant

- The clearing and removal of approximately 4,000 truckloads of material from low-grade quarry areas was completed, and subsequently used for the construction of the Project's Treatment Plant site
- The clearing of +/- 3 Ha for the construction of the Treatment Plant site area and the areas for the fresh water, waste, and settling dams was completed
- The completion of civil engineering works, the construction of a 4m raised gabion rock wall around the plant site, and extensive concrete work was completed in preparation for the installation of the deposit specific modular Treatment Plant and associated offices and workshops

- The design, manufacturing, and installation of a new purpose built 150 TPH modular Treatment Plant, including bulk material reduction pans, DMS, final recovery, and extensive conveyor structures was completed
- The installation of generators to support the short-term power requirements of the Project during construction and trial mining was completed, and with the installation of a dedicated power line to the Project now complete, these units now serve as standby power for the Project
- The procurement and delivery of long-term production related equipment to the Project was completed

Double welded plastic one-piece 2mm lining were installed in the dams, along with the installation of extensive water management recovery systems and tanks aimed at reducing overall water consumption at the Project. These initial dams will serve as fresh water storage dams going forward. The Company has also embarked on a program of "continuous rehabilitation" whereby the fines generated during the treatment process are pumped to mined-out quarries where they are then allowed to settle. The water that remains is then pumped back to the Treatment Plant for reuse which serves to further reduce rehabilitation costs, and the fresh water requirements.



Figure 18-5 Water Dams

#### 18.4 In-field Dry-Screening Plant Development

Due to the nature of the deposit, and specifically the high percentage of fines materials under 1.0mm known to exist in the deposit, a separate in-field Dry-Screening Plant located at the quarry was identified as a key element in the advancement of the Project. The design of the deposit specific Dry-Screening Plant was aimed at reducing the effects these fine material would have on both water consumption, and the overall size of the Treatment Plant which would be required to achieve the desired move to large scale trial mining exercises and the potential processing levels which may be

expected of a medium sized operation should the results of the trial mining exercises support this further advancement.

The development of the Dry-Screening Plant was primarily aimed at dry-screening out fine materials without the introduction of water (with the initial target being to remove approximately 45% of the fine material <1.2mm in size), thus lowering operational costs through a reduction in hauling distances and associated costs, reducing overall water consumption, and reducing the size and capital expenditure requirements of the proposed Treatment Plant. Initial efforts to achieve these goals using a mobile Terex H-6203 Power-Screen with a proposed 800 tonnes per hour head feed were ultimately unsuccessful due to the equipment's inability to effectively remove material at the desired -1.2mm lower cut-off target in a consistent manner at desired volumes.

Additional design work was completed as a result of this, and new equipment was procured, deployed and installed to establish a much larger purpose built in-field dry-screening system in an attempt to achieve these goals. The original design of this Dry-Screening Plant consisted of a large 500 TPH rotary trommel, Dabmar Resonance Screen and Dabmar high-frequency, non-blinding Bivitec Screen with conveyors transporting the material between components. Run-of-Mine material was fed into the trommel with the ~-75mm material reporting to the Resonance Screen where it was split into +26mm and -26mm size fractions. The -26mm material passed over the Bivitec Screen to remove the -1.2mm fine material. The design of the Dabmar Bivitec unit and its flexible polyurethane panels allowed for significant improvements in the effective dry screening and removal of fine material due to their inherent ability to reduce blinding or blockages associated with traditional screening units at such cut-off sizes.

Material in the +26.0mm to -75mm size fraction consisted mainly of calcretized material consistent with the higher-grade lower basal gravels of the deposit. This material was stockpiled for later processing pending the ongoing development and finalization of the dry-screening plant, with the key focus initially being on the effective removal of fine material, after which a determination of a suitable processing method for the liberation of these +26.0mm materials could best be determined.

After initial testing work was completed Dry-Screening Plant certain limitations became apparent due to the sheer volume of fine material in the deposit. In order to achieve the desired throughput levels, eliminate the inefficiencies and costs of handling the material multiple times with heavy equipment, and to achieve the targeted reduction of material by up to 70% through the removal fines, it was necessary to expand the size of the Plant further. As such, a second in-line Bivitec Screen, the installation of extensive additional conveyor structures, and a large split material storage and auto loading bin were added. At the time the Company also made the decision to reduce the bottom cut off from 1.2mm to 1.0mm in order to increase the potential recover additional fine diamonds.

Once screened off, the +75mm material from the trommel, made up mostly of waste rock, and the fine material under 1.0mm are returned to the nearby quarry for immediate rehabilitation, thus achieving further operational efficiencies.

The Company's current in-field Dry-Screening Plant consists of the following components:

- Feed bin and rotary trommel, with a throughput capacity of up to 500 tons per hour and an upper cut-off size of ~75.0mm
- A Dabmar Resonance double-deck screen for product size classification
- Two Dabmar Bivitec high-frequency 10' x 20' double-deck screens in-line of one another to create a closed loop fines removal component, with an upper deck cut-off size of 5.0mm and a lower deck cut-off size of 1.0mm
- A 200 cubic meter material split storage and transfer bin whereby material can be temporarily stored on one side to be re-passed over the Dabmar screens for the additional removal of fines as required, and a transfer/storage side where screened material can be stored and then automatically loaded via conveyor onto trucks for transport to the Project's Treatment Plant without the need to be handled by heavy equipment
- Extensive conveyors structures which move the material between each component
- A dedicated power line and transformer to supply Eskom power to the plant, as well as a 500 kVa diesel generator on skid mounted enclosure to provide back-up power to the plant



Figure 18-6 In-field Dry Screening Plant and Trommel

#### **18.5 Treatment Plant**

Due to the nature of the deposit, and specifically the high percentage of fines materials under 1.0mm, the in-field Dry-Screening Plant was identified as a key element in the advancement of the Project. The development of this separate in-field Dry-Screening Plant has demonstrated an ability to reduce the ROM material which reports to the Treatment Plant by up to 70%. In addition to reducing operational costs and overall water consumption at the Project, the removal of these fine materials also reduced the overall size and processing capacity requirements of the Project's Treatment Plant. A deposit specific, modular Treatment Plant was designed, installed, and developed at the Project

for use in conjunction with the Dry-Screening Plant. The size and scope of these combined plants are designed to support not only the envisioned trial mining and bulk sampling efforts, but also to support increased processing tonnages consistent with a medium sized mining operation for the long-term should this be warranted.

Screened material in the +1.0mm to -26.0mm size fractions from the Screening Plant is hauled to the Treatment Plant where it is deposited into a feed bin and transported via conveyor to an autogenous mill (installation expected to be completed in April 2015). From there it is size classified and reports to one of three 16' wet rotary pre-concentrating pans.



Figure 18-7 Autogenous Mill

Material extracted for further processing then reports to a Dense Media Separation (DMS) plant. The heavy minerals separated out by the DMS are deposited into concentrate storage silos before being selected for processing through one of the plant's x-ray flow-sort machines where the recovery of diamonds takes place. Discarded concentrate material which has passed through the x-ray machines then reports to a secondary grease table as a final audit to recover any rough diamonds which may have been missed by the x-ray units.

Material identified as having the potential to be a rough diamond, or other material recovered by the x-ray machines is then transferred in a hands-off method to a fully integrated sorting facility where the material is dried before being transported through tubes to enclosed sorting stations (installation and completion of automated hands-off sorting system expected in April 2015).

Once the material has been processed and the diamonds extracted at the treatment plant, the coarse tailings are dewatered and transported via a conveyor to a tailings transfer bin with auto-loading conveyors so that they may be hauled back to the quarry for immediate rehabilitation. Fines residue material is pumped to a separate quarry whereby the solids are allowed to settle and the water remaining is then pumped back to the Treatment Plant for reuse. This allows for immediate cost effective rehabilitation.



Figure 18-8 Krone-Endora Treatment Plant

The Company's current 150TPH treatment plant consists of the following components:

- Material feed bin and conveyor
- Three 16' rotary pre-concentrating pans
- 10' x 20' Vibramech double deck dewatering screen and stacker cyclone for water recovery and fines removal
- 30 ton per hour Dense Media Separation plant
- Three chamber concentrate silo unit with a capacity of ~20 m<sup>3</sup>
- Flow Electronics containerized X-Ray sorting machines
- A containerized grease table with associated scrubber, feeder screen, and boiling equipment
- Hands-free sorting system with containerized sort house, 4 station glove box, and automated drying and sizing equipment
- Numerous associated conveyors, pumps, sumps, water tanks, etc.
- Containerized offices, stores, and covered workshops.
- Extensive satellite and ground based telecommunication and radio systems
- Extensive high definition security cameras and remote monitoring systems
- Covered fuel storage tank area with storage capacity of 23,000 litres
- A dedicated power line and transformers to supply the plant with Eskom power as well as a 440kVa diesel generator on skid mounted enclosure for back-up power.
- Various other items consistent with those of a medium size diamond mining operation



Figure 18-9 Rotary Pans and X-ray FlowSort Final Recovery

With the Development of the Project's in-field Dry-Screening Plant complete, and to support the continued advancement of the Project, further upgrades and expansions to the Treatment Plant are currently underway. These additions are specifically aimed at the installation of processing equipment to allow for the liberation of calcretized materials previously being stockpiled in the +26.0mm to -75.0mm size fractions. They are also expected to provide further operational efficiencies and cost savings while enhancing the treatment of materials in all size fractions.

Upgrades currently being undertaken at the Treatment Plant include the addition of a large wet scrubber / autogenous mill, associated size classification screens, automated loading transfer bin, and various other final modifications aimed at providing the Company with the ability to effectively treat all materials in the +1.0mm to -75.0mm size fractions.

The procurement, construction, and installation of all items noted as being part of these upgrades are well underway, and targeted for completion by April of 2015. Once complete, the Company plans to begin processing all materials in the noted size fractions, including those previously stockpiled materials in the +26.0mm size fractions.

These upgrades are designed to provide the Company with additional information on the deposit, to support planned increases in processing volumes to allow the Company to further advance the Project through a planned move to large-scale trial mining, and to assist the Company at arriving at initial production decisions for the Project. In conjunction with these exercises, the Company plans to also use these facilities to support the planned additional bulk sampling of other areas of interest and targets identified in both the K3 and Confluence areas.

#### 18.6 Water Pipelines Construction

The Company completed the design and installation of three water pipelines totaling approximately 14km in length to provide the Project with fresh water from three groundwater resources. The South African Department of Water Affairs (now the Department of Water and Sanitation) granted the Company 211,291 m³ per annum from these water sources. The Company has done further geohydrological drilling and testing for additional sources of water and has applied for a new Integrated Water Use Licence which, if granted, would provide the Company with an annual water usage increase to over 400,000 m³.



Figure 18-10 Water Pipeline and Crossing

#### 18.7 Power Lines Procurement

An approximately 8.4 km 1,000 kVa main power supply line was constructed by the State electricity supplier, Eskom, to supply power to the Project. The Company has also installed an additional 0.7 km power line to support the in-field Dry-Screening plant, and an additional ~3.1 km of power lines to supply power to 2 of the boreholes which were installed to supply water to the Treatment Plant for processing. The third borehole is supplied by a dedicated Eskom line and transformer.

#### **18.8 Heavy Equipment**

The Project is supported by a number of light duty vehicles typical of any medium-sized mining operation, along with various support trailers, diesel tanks, and a staff transport bus. The Company owns various pieces of heavy equipment for mining and plant operation, including a Volvo EC480 tracked excavator, a Volvo L220 front end loader, and a Volvo L150 front end loader. These items are supported by additional contracted heavy equipment which include excavators in the 80 ton and

35 ton ranges, as well as rigid frame and articulated dump trucks, bulldozers, a grader, and various other pieces of operational equipment as required.



Figure 18-11 Excavator and Front-End Loader



Figure 18-12 Bulldozer and Articulated Dump Truck

#### 19. MARKET STUDIES AND CONTRACTS

This section is a requirement for Advanced Property Technical Reports and is therefore not strictly applicable to this Technical Report. An overview of the global diamond market and the Company's current sales agreements was, however, determined to be of value.

#### 19.1 Global Rough Diamond Production

The vast majority of industry analysts expect the global natural supply to increase at an average rate of ~5% between 2013 and 2017 (in 2013 global rough diamond production amounted to over 136 million carats). Production in established mines is expected to fall as older mines come to the end of their life or move to underground mining (going underground will make it difficult to maintain existing output levels due to additional haulage time and the technical challenges that come with underground mining). New mines coming online, however, will only represent an additional 17 million carats per year.

Given the lack of recent, economically viable discoveries, rough production is likely to remain relatively constant over the next ten years. Post 2025, when a number of mines are scheduled to go out of production, production is expected to start to decline.

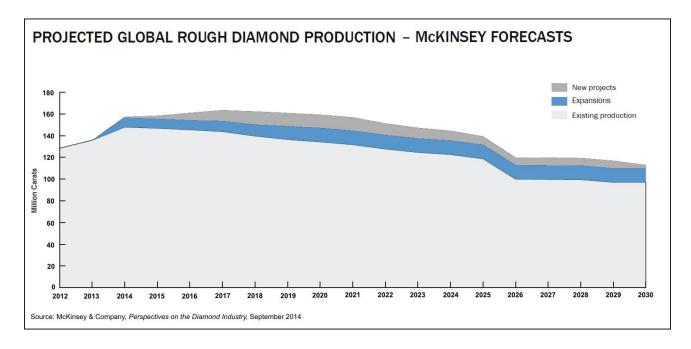


Figure 19-1 Projected Global Rough Diamond Production

Coupled with the projected decline in global production, the vast majority of industry analysts forecast an ever increasing demand for rough diamonds.

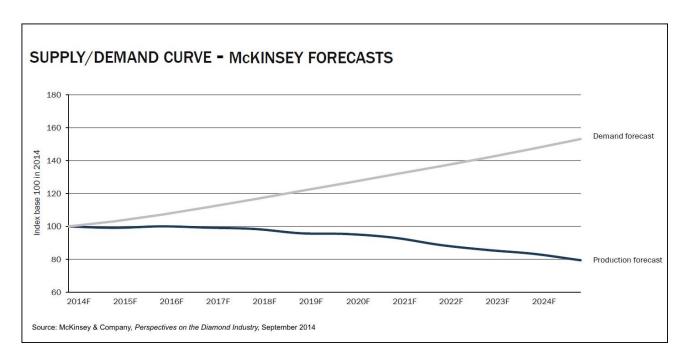


Figure 19-2 Supply/Demand Forecasts Curve

#### 19.2 Current Sales Agreements

As announced on March 29, 2011, the Company established a long-term strategic alliance and first right of refusal with Tiffany & Co. Canada, a subsidiary of the New York based Tiffany & Co., to purchase up to 100% of the production of rough diamonds from the Krone-Endora Project at current market prices to be determined by the parties on an ongoing basis. This first right of refusal agreement does not cover "specials" (defined as diamonds 10.8 carats in size or larger) that may be sold by the Company in open tender.

Every diamond producer in South Africa is obliged to present their full "Run-of-Mine" production to the State Diamond Trader, who can then choose to purchase a representative sample of up to 10% of the production at fair market value. The State Diamond Trader buys and sells rough diamonds in order to promote equitable access to and beneficiation of diamond resources in South Africa. Table 14-2 *Diamond Sales Summary* shows that the Company is compliant in its obligation to provide the State Diamond Trader with access to rough diamonds recovered from the Project, and as such, the State Diamond Trader has been an active participant in the Company's diamond sales to date.

# 20. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

As part of the preparation phase for lodging the Mining Right application various studies were done in order to firstly conduct mining operations in a responsible method, and secondly to fulfil the Company's obligations insofar the requirements of the application process.

- 1. An Environmental Impact Assessment (EIA) from which the Environmental Management Plan (EMP) was derived.
- 2. An Ecological Study for the preservation of the possible endangered habitat.
- 3. A Heritage Assessment to determine possible impact during mining operations
- 4. A Hydrological Study to determine groundwater availability and groundwater use in the direct vicinity of the Project area
- 5. A Social/Community Impact Study by means of meetings held with all Interested and or Affected Parties in the area in and around the Project area.

At present the DMI Minerals' operations at Krone-Endora is conducted in accordance to the Mine Working Programme (MWP) as approved by the DMR and the EMP, which is an all-inclusive programme based on the various studies, as delineated above, and carried out by the Company.

# 21. CAPITAL AND OPERATING COSTS

This section is a requirement for Advato this Technical Report.	anced Property Technic	al Reports and is therefore	not applicable

# 22. ECONOMIC ANALYSIS

This section is a requirement for Advanced Property Technical Reports and is therefore no to this Technical Report.	ot applicable

# 23. ADJACENT PROPERTIES

The only adjacent property to the Project where diamonds are mined at present is Venetia Mine, which is also believed to be the source of the diamonds at Krone-Endora. De Beers' Venetia Mine is widely accepted as South Africa's largest producer of diamonds, with a high percentage of all diamond production classified as gem quality.

To the knowledge of the Author no tests were conducted for diamond occurrences directly downstream from Krone-Endora. To the southwest of Venetia is the farm Kaalkraal 100MS where kimberlitic occurrences have been identified.

### 24. OTHER RELEVANT DATA AND INFORMATION

The Author notes that previously reported internal grades reviewed from 1995 datasets of boreholes from previous exploration by De Beers reviewed by the Author may prove to be lower than the actual values that may be achieved during subsequent mining. This was noted both by the Author and De Beers to occur during the bulk sampling exercise completed in 2004, whereby the 1995 borehole information on the site where Pit 1 was excavated initially indicated a much lower recorded grade from drilling than the actual grade which was subsequently recorded during bulk sampling. While the increase to the level recorded in Pit 1 may not always be the case over the entire property, it was also noted to be the case for Pit 2, however to a lesser extent.

Given this report and the inferred estimate being provided is based on calculations and data associated with the De Beers grades as recorded from the 1995 drilling datasets, it must then be born in mind that the potential of the Project as reflected in this report's inferred resource table may prove to be conservative.

#### 24.1 South African Economy

South Africa's export-based economy is the second largest in Africa (being overtaken by Nigeria just this year). Arguments, however, can be made that South Africa is the most developed economy in Africa, as Nigeria is still heavily dependent on its oil and gas sector (14% of its GDP, Gross Domestic Product). South Africa is one of the wealthiest counties in terms of natural resources, and is a leading producer of platinum, chromium, palladium, manganese, gold, coal, and diamonds. From 1993 to 2014, the South Africa economy grew at an average of 3.16% per year, although in the first quarter of 2014 the economy shrank by 0.6 %. Successive governments have failed to address structural problems such as the widening gap between rich and poor, low-skilled labour force, high unemployment rate (approaching 25%), deteriorating infrastructure, and high corruption and crime rates.

#### 24.2 The Mining Industry

Mining in South Africa has been the main driving force behind the history and development of South Africa's economy. Large scale mining started with the discovery of a diamond on the banks of the Orange River in 1867, and the subsequent discovery and exploitation of the Kimberley pipes a few years later. Gold rushes to Pilgrim's Rest (1873) and Barberton (1881) were precursors to the biggest discovery of all, the Witwatersrand Gold field in 1886. Today, the relative value of diamonds and gold to the mining industry has been overtaken by coal, the platinum group metals (PGM), and iron ore.

The relative contribution of mining to South Africa's GDP has declined over the past 10 to 20 years, although the industry remains a cornerstone of the economy. According to the South African Chamber of Mines, the mining industry:

- Creates one million jobs (500,000 direct and 500,000 indirect).
- Accounts for about 18% of GDP (8.6% direct, 10% indirect and induced).
- Is a critical earner of foreign exchange at more than 50%.
- Accounts for 20% of investment (12% direct).
- Attracts significant foreign savings (South African Rand (ZAR) 1.9-trillion or 43% of value of Johannesburg Stock Exchange).
- Accounts for 13.2% of corporate tax receipts (ZAR 17-billion in 2010) and ZAR 6-billion in royalties.
- Accounts for ZAR 441-billion in expenditures, ZAR 407-billion spent locally.
- Accounts for ZAR 78-billion spent in wages and salaries.

#### 24.3 South Africa's Mineral Legislative Environment

#### 24.3.1 Mineral and Petroleum Resource Development Act 28 of 2002 ("MPRDA")

The Mineral and Petroleum Resources Development Act (MPRDA), 2002 aims to:

- recognize that mineral resources are the common heritage of all South Africans
- promote the beneficiation of minerals
- guarantee security of tenure for existing prospecting and mining operations
- ensure that historically disadvantaged individuals participate more meaningfully
- promote junior and small-scale mining

In terms of the Act, new order rights may be registered, transferred and traded, while existing operators are guaranteed security of tenure. Mining rights are valid for a maximum of 30 years and renewable for another 30 years, while prospecting rights are valid for up to five years and renewable for another three.

#### 24.3.2 Black Economic Empowerment (BEE)

In October 2002, with the support of all mining houses and labor unions concerned, the Broad-Based Socio-Economic Empowerment ("BEE") Charter was introduced by South African Cabinet. This Charter called for certain ownership goals (15% by 2007, and 26% by 2014) in the mining industry for the benefit of historically disadvantaged South Africans within five years. The 2002 Charter was since updated in September 2010, while keeping the 26% target for 2014.

On March 5, 2008, Diamcor announced a formal joint venture partnership with well-established South African Broad-based BEE group Nozala Investments (Pty) Ltd. Nozala represents the interests of an estimated 500,000 rural women shareholders, and is also a well-respected corporate entity in the

South African business community. This partnership is currently reflected in the Diamcor's South African subsidiary, DMI Minerals South Africa (Pty) Limited, which was formed to pursue diamond mining projects with near-term production potential within South Africa. Under the terms of the joint venture, which exceed the stated requirements of the BEE charter in South Africa, Diamcor retained a 70% direct ownership in the DMI Minerals subsidiary, with Nozala acquiring a 30% direct shareholder ownership interest. Operationally, expenses charged to the development of Krone-Endora, and any profits generated, will be similarly proportional.

#### 24.3.3 The Minerals and Petroleum Resources Royalty Bill

The royalty bill was introduced on May 1, 2009. In terms of the currently applicable formulae, the applicable royalty rates will vary according to the profitability of the mining company, subject to a minimum rate of 0.5% and maximum rate 9.0% for diamonds (unrefined minerals). The profitability parameter in the formulae is EBIT and it also allows for 100% capital expensing which is an acknowledgement of the high capital costs associated with mining.

$$Y(u)=0.5+\{EBIT/(Grosssalesx9)\}$$

Where:

Y (u) = Royalty percentage rate;

EBIT = Earnings before interest and taxes (but EBIT can never go below zero).

The formula contains four parameters: (1) an intercept term, 0.5, (2) EBIT, (3) gross sales and (4) 9 as a constant:

- The 0.5 essentially acts as a minimum royalty percentage rate (0.5%) in order to ensure that Government (as custodian) always receives some level of royalty payments for the permanent loss of non-renewable resources.
- EBIT essentially measures an extractor's net operating mining profits in relation to recovered mineral resources to be eventually transferred. Taxes and other Government charges, such as the royalty, are excluded because EBIT is part of the royalty determination. The exclusion of interest effectively neutralises how key methods of financing (i.e. debt or equity) mineral operations are undertaken. EBIT for mineral resources transferred is conceptually viewed as the aggregate amount of:
  - (1) Gross sales for all transferred mineral resources;

**PLUS** 

(2) Recoupment in respect of the disposal of assets used to develop mineral resources to the extent the depreciation on those assets offset EBIT:

**LESS** 

(3) Operating expenditure incurred (and depreciation allowances applicable to capital expenditure) relating to the extraction and development of mineral resources to the extent those expenditures are both: (i) deductible under the Income Tax Act, and (ii) bring those minerals to a Schedule 1 or Schedule 2 condition (as applicable).

#### 24.3.4 The Diamond Amendment Bill

The 2005 amendments to the Diamonds Act, viz., Diamonds Amendment Act, 2005 and the Diamonds Second Amendment Act, 2005 as well as the 2007 amendment to Regulations under the Diamonds Act took effect on 1 July 2007. These Regulations were also, subsequently, amended on 4 April 2008. The object of the Regulator (SADPMR) in terms of the Diamonds Act, 1986 (as amended) is to ensure equitable and regular supply of rough diamonds to local beneficiators. It makes provision for the establishment of the State Diamond Trader who will facilitate the supply of rough diamonds equitably and a Precious Metals and Diamonds Regulator to promote equitable access to rough diamonds to licensees. The objects of the amendments are to:

- Promote a culture of value addition of minerals by maximising the value of economic benefit of South Africa's mineral wealth;
- Recognise the fact that beneficiating our minerals locally contributes to South Africa's economy;
- Prevent and abolish restrictive and unfair practices with regard to accessibility and availability
  of minerals and access to markets; and
- Create an internationally competitive and efficient administrative and regulatory regime by means of national licensing system.

In this regard the regulators functions include the implementing, administering and controlling of all matters relating to the purchase, sale, beneficiation, import and export of diamonds; and establishing diamond exchange and export centres, which will facilitate the buying, selling, and export and import of diamonds.

#### 24.3.5 Diamond Export Levy Bill 2007

The Diamond Export Levy Bill was required to give effect to certain provisions of the Diamonds Act, 1986, as amended. The Diamond Export Levy Bill's main objective is to support the local beneficiation of rough diamonds. The beneficiation of rough diamonds is seen as important to encourage the development of the local economy, skills and employment creation. The Bill proposes a 5% export levy on rough diamonds that should contribute towards local beneficiation, but is low enough so as not to unduly encourage smuggling. The 5% levy applies to all rough (natural unpolished) diamonds that are exported, while synthetic diamonds are exempted. The levy amount will be equal to 5% of the value of a rough diamond exported, as specified on a return described in Section 61 of the Diamonds Act, 1986 or of the value as assessed by the Diamond and Precious Metals Regulator described in section 65 of the Diamonds Act, 1986.

The Bill contains relief measures that may offset the 5% levy in full or in part. A producer is entitled to receive a credit for imported rough diamonds. This credit will offset (in full or in part) a producer's export duty liabilities. The Minister of Minerals and Energy may also exempt a producer from the 5%

export levy if a producer's activities are supportive of local diamond beneficiation, or the producer has an annual turnover of less than ZAR10 million, and such a producer has offered his or her rough diamonds for sale at the Diamond Exchange and Export Centre but there were no local buyers. However, the diamonds must subsequently be sold for an amount at least equal to the reserve price at which such diamonds were offered at the centre. These conditions preserve South African's "right of first refusal" with respect to bidding on any rough diamond intended for export.

#### 24.3.6 Kimberley Process

The Kimberley Process is a joint governments, industry and civil society initiative to stem the flow of conflict diamonds – rough diamonds used by rebel movements to finance wars against legitimate governments. The trade in these illicit stones has fuelled decades of devastating conflicts in countries such as Angola, Cote d'Ivoire, the Democratic Republic of the Congo and Sierra Leone. The Kimberley Process Certification Scheme (KPCS) imposes extensive requirements on its members to enable them to certify shipments of rough diamonds as 'conflict-free'. The core mandate of the KPSC is to guarantee consumers that the organisation is aware of the origin of the diamonds that the consumers buy.

As of August 2013, the Kimberley Process had 54 participants, representing 81 countries, with the European Community and its 28 Member States counting as a single participant. Kimberley Process members account for approximately 99.8% of the global production of rough diamonds. In essence, the participants in the KPSC have agreed that they will only allow for the import and export of rough diamonds if those rough diamonds come from or are being exported to another Kimberley Process participant. The KPSC requires that each shipment of rough diamonds being exported and crossing an international border be transported in a tamper-resistant container and accompanied by a government-validated Kimberley Process Certificate. Each certificate should be resistant to forgery, uniquely numbered and include data describing the shipment's content. The shipment can only be exported to a co-participant country in the Kimberley Process. No uncertified shipments of rough diamonds will be permitted to enter a participant's country. Once a certified shipment has entered its country of destination it may be traded – in whole or part – and mixed with other parcels of rough diamonds as long as all subsequent transactions are accompanied by the necessary warranties. Failure to adhere to these procedures can lead to confiscation or rejection of parcels and/or criminal sanctions. Any rough diamonds being re-exported will also require Kimberley Process Certificates, which will be issued in the exporting country. These re-exports can comprise any combination of rough diamonds that have been previously imported through the Kimberley Process Certification Scheme.

In order to strengthen the credibility of the Kimberley Process agreement, as well as to provide the means by which consumers might more effectively be assured of the origin of their diamonds, the World Diamond Council proposed that the industry create and implement a System of Warranties for diamonds. Under this system, which has been endorsed by all Kimberley Process participants, all buyers and sellers of both rough and polished diamonds must warrant that, for each parcel of diamonds "The diamonds herein invoiced have been purchased from legitimate sources not involved

in funding conflict and in compliance with United Nations resolutions. The seller hereby guarantees that these diamonds are conflict free, based on personal knowledge and/or written guarantees provided by the supplier of these diamonds." In addition, each company trading in rough and polished diamonds is obliged to keep records of the warranty invoices received and the warranty invoices issued when buying or selling diamonds. This flow of warranties in and warranties out must be audited and reconciled on an annual basis by the company's own auditors. Failure to abide by the aforementioned principles exposes the member to expulsion from industry organizations.

#### 25. INTERPRETATION AND CONCLUSIONS

When drilling an area the purpose would be to obtain an understanding of the geological variations of the orebody. In the case where mineralization of the orebody is fairly uniform, i.e. kimberlites, sampling of the drilled material will normally give the geologist a very good indication of the grades to be expected. The same holds for bulk sampling; bulk samples regularly spaced in a uniform orebody will determine the expected grade for mining purposes.

Alluvial diamond deposits are the opposite. Mineralization is definitely not uniform, but is very much dependent on trap sites. Large areas can be barren while individual sites can be very rich, which is why alluvial operations are normally high risk investments.

Based on the fact that diamonds were found in the boreholes drilled, notwithstanding the fact that it was large diameter drilling, indicates the high potential of the area. It proves that this deposit is not an alluvial deposit only, but rather a combination of alluvial and eluvial deposition. The latter indicates a "direct shift" of the source material, especially in the case of the basal gravels.

The diamonds are still very much caught-up with the host rock material when redeposited downstream with the little segregation that took place, hence the distribution of the smaller diamonds throughout the orebody.

While trying to select a "random" site during bulk sampling, the chances are unlikely in selecting a richer or poorer area. Taking this into consideration, together with known sampling problem/errors which are noted to have occurred with the Project, it is possible that the deposit is much richer than what is anticipated from the dataset of this Project.

The problems/errors identified by the Author which could affect the Project are:

- 1. The variability of the geology, especially the upper gravel suite, was not taken in consideration (Ward, 2005)
- 2. Most of the holes drilled in 1995 did not penetrate to the bedrock, especially in the basal gravel; leading to under evaluation of the latter (Millad, 2005)
- 3. The 1995 samples were not all fully analysed, leading to under evaluation (Milled, 2005)
- 4. During the bulk sampling in 2004 the full width of the Pit 1 area was not processed. Gravel material was left behind, leading to under evaluation (Millad, 2005)
- 5. Bedrock contamination in Pit 2 led to under evaluation (Millad, 2005)
- 6. Basal gravel in Pit 3 was not removed. The pit bottom was still in the upper gravel suite (Comment from Author during site visit)
- 7. The results of the upper gravel suite from the bulk sampling were not considered during the evaluation done by Millad in 2005

- 8. With the current trial mining exercise mainly 'free' diamonds within the upper and lower gravel suites were recovered. The harder calcretized gravels were not processed as yet, but were stockpiled for the time being.
- 9. To evaluate all horizons for possible diamond content during the current trial mining process, the overburden, which consists of alluvium and weathered kimberlite, was processed as well. As this horizon does not contain diamonds, the bulk of it dilutes the grade (cpht) which results in an underestimation of the resource.

## **26. RECOMMENDATIONS**

A recommended work programme to finally prove the viability of the Project would be as follows:

#### 26.1 Treatment of Overburden

During the present trial mining process the overburden should be removed for later rehabilitation as it does not contain any gravel material. (Where found it was due to accidental removal of the top gravel layer of the upper zone.) The deposition of the alluvium and fine-weathered kimberlite occurred during low energized weathering where only 'fines'/silts were transported and deposited. This recommendation has no cost associated with it, and could potentially result in a cost savings, as the overburden would not be sent through the dry-screening process.

#### 26.2 Combine Upper and Basal Gravel Suites

Would it be the Company's preference to record findings for both upper and basal gravel suites as a whole, it can be mined as a combined unit. From an economic perspective and processing time this could be more viable. No cost is associated with this recommendation.

#### 26.3 Grade Distribution Plan

Would the area be divided into regular 'blocks' and processed as such, a grade distribution plan can be drawn giving a better understanding of diamond deposition pattern/s during paleo flow. It will assist during full exploitation by indicating 'pay-zones' within the deposit. No cost is associated with this recommendation.

#### 26.4 Continuing Upgrade of Treatment Plant

An obviously critical component in the evaluation of any diamond deposit is the assurance that most or all diamonds are being recovered efficiently. Small-scale test recovery data is of little use if it cannot be scaled up to an operating level. Alluvial diamond projects require project-specific design of treatment plants to achieve maximum recoveries, as each deposit has their unique properties. The Author supports the Company's decision to establish a full-scale Treatment Plant that would be capable of handling increased processing levels of material should a mining decision be made.

Part of the ongoing upgrades should include the installation of weightometers, to accurately record the amount of material treated at the plants on a daily basis, consistent with industry standards. The appropriate areas for the installation of these items has been identified by the Company, and is being done in conjunction with the noted upgrades underway. A record of the material treated and diamonds

recovered (giving the grade of the material) will confirm whether the resource is performing as expected.

It is recommended that proper processing of the currently stockpiled oversized and calcretized material (+26.0mm) should be completed to obtain 'total' liberation of diamonds to fully evaluate the Project. Upgrades currently being undertaken at the Treatment Plant include the addition of a large wet scrubber / autogenous mill, associated size classification screens, automated loading tailings bin, and various other modifications aimed at providing the Company with the ability to treat all materials in the +0.8mm to -75.0mm size fractions (previously only +1.0mm to -26.0mm was being processed during the development, testing and commissioning of the Dry-Screening Plant).

Actual costs associated with these upgrades have been determined and allocated to complete these items, and the Company's development budget is well-financed. Any diamonds recovered incidental to the continued ongoing commissioning of the plant will also offset operational costs.

#### 26.5 Extend Trial Mining to all areas

Once the upgrades to the Treatment Plant are complete, the trial mining process should be extended to cover the width of the diamond deposit in K1. The other two zones, K3 and the Confluence area, should also eventually be bulk sampled, or trial mined, to obtain a better evaluation of the Project. Given the estimated number of carats in the K1, K3, and Confluence areas (see Table 14-4, *Summary of Inferred Mineral Resource Estimate for Krone-Endora*), a full evaluation of the K1 area is the priority, as it accounts for more than 85% of the Project's current inferred carat estimates.

The costs associated with the above work would not expected to be significant given the infrastructure already in place at the Project, as some of the K1 evaluation can be done during the ongoing Treatment Plant commissioning work (with its associated recovery of diamonds). The priority of evaluating the K3 and Confluence areas is not as critical, and therefore is dependent on the economic climate at the time and the scale of mining. While the initial decision to move to full-scale mining will likely be based on the results from the work being completed on the K1 alone, the trial mining of K3 and the Confluence areas will allow the Company to provide updated information on these areas in future technical reports, and aid the Company in its determination of subsequent mining decisions which may include these areas.

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# 28. DATE AND SIGNATURE PAGE

This report titled "Technical Report on the Krone-Endora Alluvial Diamond Project, Limpopo Province, South Africa" with an effective date of 02 February 2015, prepared by J. F. (Faan) Grobbelaar, Pr.Sci.Nat. and James P. Hawkins, P. Geo., on behalf of Diamcor Mining Inc. dated 28 April 2015 was prepared and signed by the following Authors:

J. F. Grobbelaar, [Pr.Sci.Nat.] MGSSA Dated at Kimberley, NC, South Africa 28 April 2015

James P. Hawkins, B. Sc., P. Geo.

Dated at Kelowna, BC, Canada

Vames P Hawkins

28 April 2015

# **APPENDIX I:**

**Certificate of Authors** 

#### **CERTIFICATE of AUTHOR**

- I, J. F. (Faan) Grobbelaar, Pr.Sci.Nat., do hereby certify that:
- 1. I am Principal Consulting Geologist with:

FGA Consultants. 14 Achilles Street Kimberley, NC, South Africa 8301

- 2. I obtained a National Higher Diploma from the School of Mining, Witwatersrand Technicon, South Africa in 1986 and a Post Graduate Diploma (GDE) Mine Engineering from the University of Witwatersrand (South Africa) in 1998.
- 3. I am a Geological Scientist registered with the South African Council for Natural Scientific Professions, registration no 400283/06.
- 4. I have worked as a geologist for a total of 22 years since my graduation. The last 10 years were spent on the alluvial diamond fields of central South Africa, Namibia and in the Democratic Republic of the Congo (DRC) as a consultant. During this period I rendered assistance to various small, medium and large-scale operators, varying from the evaluation of potential gravel terraces and mining geology to the writing of SAMREC-compliant Competent Person's Reports (CPR's). The latest CPR document I completed for alluvial diamonds was done for DMI Minerals on their initial NI 43-101 Technical Report on Krone-Endora in 2009.
- 5. I have read the definition of "qualified person" set out in National Instrument 43-101("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101.
- 6. I am responsible for the preparation of Sections 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 20, 23, 25, 26 and 27 (Sections 15 to 22 are not relevant to this Technical Report as they are additional requirements for Advanced Properties) of the Technical Report titled "Technical Report of the Krone-Endora Alluvial Diamond Project, Limpopo Province, South Africa", with an effective date of 02 February 2015 relating to the Krone-Endora property. I visited the Krone-Endora property January 15<sup>th</sup> and 16<sup>th</sup>, 2009; July 4<sup>th</sup>, 2011; and December 12<sup>th</sup> and 13<sup>th</sup>, 2014.
- 7. I have had prior involvement with the property that is the subject of the Technical Report, as I authored the 2009 Technical Report of the same name.
- 8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
- 9. I am independent of the issuer and of the vendor applying all of the tests in section 1.4 of National Instrument 43-101.
- 10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 28th day of April, 2015.

J.F. Grobbelaar, [Pr.Sci.Nat.] MGSA

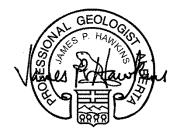
#### **CERTIFICATE of AUTHOR**

- I, James P. Hawkins, P. Geo. do hereby certify that:
- 1. I am Manager of Exploration with:

Diamcor Mining Inc. 630 – 1620 Dickson Ave. Kelowna, BC Canada V1Y 9Y2

- 2. I obtained a Bachelor of Science (B. Sc.) degree from the University of Western Ontario in 1977.
- 3. I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of Alberta (APEGA), Member Number 49189.
- 4. I have worked as a geoscientist for a total of 30 years since my graduation. The last 8 years were spent with Diamcor Mining Inc. on various diamond properties in South Africa, including 4 years on the Krone-Endora property.
- 5. I have read the definition of "qualified person" set out in National Instrument 43-101("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101.
- 6. I am responsible for the preparation of Sections 2, 18, 19, and 24 of the Technical Report titled "Technical Report of the Krone-Endora Alluvial Diamond Project, Limpopo Province, South Africa", with an effective date of 02 February 2015 relating to the Krone-Endora property. I visited the Krone-Endora property from June 1<sup>st</sup> to July 8<sup>th</sup>, 2011; and from February 22<sup>nd</sup> to April 2<sup>nd</sup>, 2012.
- 7. I have had prior involvement with the property that is the subject of the Technical Report, and as such have not authored any sections relating to Mineral Resource estimations.
- 8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
- 9. I am not independent of the issuer and of the vendor applying all of the tests in Section 1.4 of National Instrument 43-101, and as such have not authored any sections relating to Mineral Resource estimations.
- 10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 28th day of April, 2015.



James P. Hawkins, B.Sc., P. Geo.